MOTOR AGE

Vol. V No. 12

MARCH 24, 1904

Ten Cente





Light Touring Car

Having much the same outward appearance as our Runabout of 1903, but of higher power and capacity and distinctly a powerful touring car—not a Runabout—the most highly developed car of its type—the perfected product of the oldest makers of motor cars in America.

\$1450

THE 1904 HAYNES

Were the only 1904 models in the New York to Pittsburg run and earned Two First-class Awards.



Tonneau

With top and front glass, two Solar No. 1 gas headlights, two Dietz Regal oil lights, tail light, horn with tube, and full equipment.

It shows fewer mechanical changes and contains more features that years of use have proved perfect in practice than any other, and is backed by an unequaled past record—seventeen contests entered—seventeen contests won, with stock cars.

HAYNES-APPERSON CO.

The Oldest Makers of Motor Cars in America.

KOKOMO, IND., U. S. A.

Members of the Association of Licensed Automobile Manufacturers.

Branch Store: 1420 Michigan Avenue, Chicago.

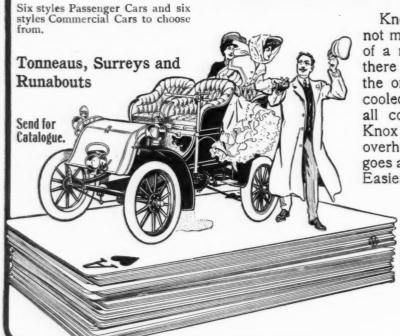
Eastern Representative: Brooklyn Automobile Co., 1239-41-43 Fulton Street, Agents for Western New York: Buffalo Automobile Exchange, 401 Franklin Brooklyn, N. Y., and 66 West 43d Street, New York.

St., Buffalo, N. Y.

KNOX WATERLESS GARS

ARE ALWAYS ON DECK

(THE CAR THAT OBVIATES THE TOW)



Knox mechanism does it. Built for use, not merely for show. Yet their beauty is of a rich, fascinating type. In the Knox there is no water to freeze in winter. Has the only high power engine successfully cooled by air. Keeps cool under every and all conditions ALL THE TIME, by the Knox patent system of air-cooling—no overheating in summer. If it's a Knox it goes and keeps going 365 days in the year! Easiest to control; easiest to ride in—

It's the Palace Car of the Day # #

There's luxury in running a Knox car.

KNOX AUTOMOBILE CO.

SPRINGFIELD, MASS.
Member Association of Licensed Automobile Mfrs.

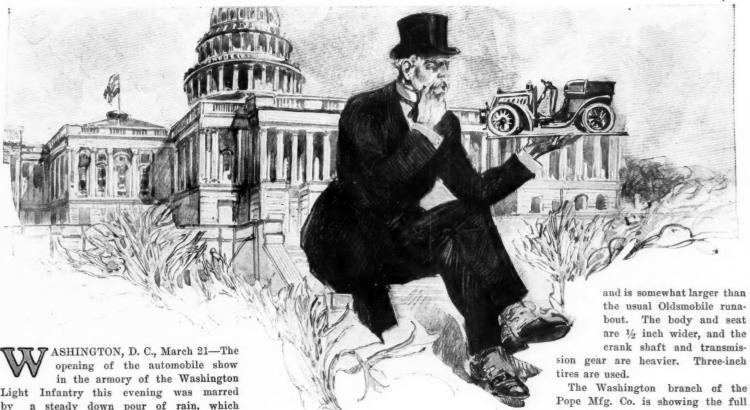
Selling Agencies in all the Principal Cities.

VOL. V. No. 12

MARCH 24, 1904

\$2.00 Per Year

SELL TO POLITICIANS AND DIPLOMATS



Light Infantry this evening was marred a steady down pour of rain, which dampened the ardor of even the most enthusiastic automobilists. This is the fourth show to be held here and the third given under the auspices of the Washington Automobile Dealers' Association. In number and variety of exhibits it is far ahead of its predecessors and if the promoters are fortunate enough to have good meather during the remainder of the week there will undoubtedly be a great outpouring of Washington's best people to see the latest developments in the automobile world.

Washington, the capital of the greatest of all nations, has among her residents famous diplomats and literary folk from all parts of the world, the most brainy statesmen, politicians, and men famous in all walks of life. It is this class of people the dealers hope to interest in the subject of automobiles and as a means to this end special invitations with admision cards to the show have been sent to more than 3,500 of the best known people.

The show is purely a local affair and is in no sense a money-making scheme, the dealers being satisfied if the receipts pay the bills.

The armory never presented a finer appearance when the doors were opened this evening. The electrical effects were particularly striking, added to which a lavish use of bunting and flags makes a picture that is very pleasing to the eye. An orchestra stationed in the gallery played throughout the evening.

Early today it looked as if the show would have to be indefinitely postponed, owing to the refusal of the municipal authorities to grant the promoters a license. It appears that the armory is under the ban of the police on account of certain violations of the regulations governing places of amusement. Manager Washington finally succeeded in fixing up the matter by agreeing to appear at the police station each evening and leave \$10 collateral, which he will forfeit by not appearing in court. The situation confronting the promoters was very embarrassing for a

The only new thing shown here is the latest model of the Oldsmobile runabout, which sells for \$650. It has a 6-horsepower engine

the usual Oldsmobile runabout. The body and seat are 1/2 inch wider, and the crank shaft and transmis-

Pope Mfg. Co. is showing the full Pope line, including the Pope-Toledo

four-cylinder touring car, Pope-Tribune and Pope-Hartford, together with the Waverley electric and Cadillac. The Rambler motor cycle is also shown.

The National Capital Automobile Co. shows the Oldsmobile runabout, touring runabout, tonneau touring car, and the Oldsmobile railway inspection car. It also shows the Franklin.

A. L. Kull & Co., successors to the Edison Automobile station, show the Ford car.

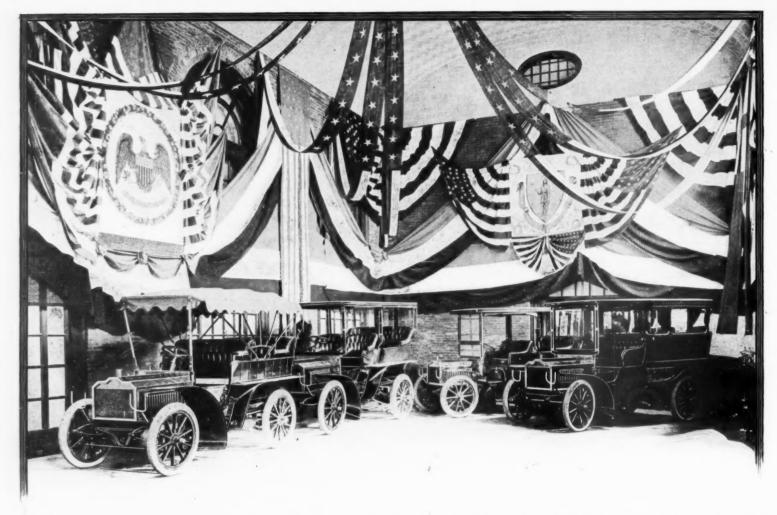
Studebaker and Buffalo electrics are shown by the Automobile Storage & Repair Co. The sundry display includes Gray & Davis lamps, champion accumulators and Fawkes tires.

Howard A. Rhine & Co. are showing the Haynes-Apperson car and Yale motor cycles.

The Thomas three-cylinder flyer is exhibited by the Baltimore Motor Car Co. The company expects to open a branch here.

A. L. Cline & Co. show the Rambler in three models, L, H and E, and the Baker electric stanhope and runabout.

Maryland Automobile Co., agent for the



MOTOR AGE

Knox in Washington and Baltimore, show the Knox chassis, which was a feature of the Knox exhibit in the New York show, together with a Knox surrey, and runabout.

The Woods Motor Vehicle Co. shows an electric victoria, stanhope and landaulette. These cars are handled here by the Automobile Storage & Repair Co.

An Acme touring car, Reading steamer and Clement motor cycle form the exhibit of Charles E. Miller & Bro.

One of the largest and finest exhibits is that of F. A. La Roche & Co., of New York. It consists of the Darracq chassis shown at Paris and New York, a Darracq king of the Belgians touring car and another touring car. The chassis is shown over a mirror and was always a center of attraction.

Cook & Owessney, of Washington and Baltimore, have a large exhibit consisting of a Winton touring car, White steamer, Stevens-Durvea and Orient buckboard.

The Washington Electric Vehicle Transportation Co. shows a Columbia 24-horsepower gasoline touring car, Columbia 24-horsepower bout and Columbia electric victoria.

A big line of automobile accessories are shown by the National Electrical Supply Co. Included in the exhibit are Jones speedometers, Veeder odometers, Whitney chains, Diamond and Continental tires.

The United Electrical Mfg. Co. shows a line of Crescent dry batteries.

The Chautauqua Lightning wrench is shown by William Hjorth, of Jamestown, N. Y.

Saks & Co. show automobile clothing for both men and women, together with a big line of sundries.

The Schaum Automobile Co., of Baltimore and Washington, shows a 16-horsepower gaso-

A Corner of the Horticultural Hall, Boston, Showing Style of Decoration

line touring car that is just being put on the market. It sells for \$1,500.

The Neverout lamp is shown by the Rose Mfg. Co., of Philadelphia.

Washington is rapidly becoming a great field for the sale of automobiles and the show now in progress will undoubtedly stimulate interest. Adjacent to the armory is the White House ellipse, where the demonstration cars can be used to good advantage.

BEST EVER HELD IN HUB

Boston, March 21-The recent automobile show in this city netted a handsome sum for the Boston Automobile Dealers' Association. Not only that, but the show caused the transaction of something like \$50,000 worth of business during its progress, and no small amount of business will certainly be done later as the result of the exhibit. No show has ever been held in this city which has proven of so great a value to the automobile industry and to the individual dealers. All week long business was transacted by every one of the dealers, much to their satisfaction and the swelling of their bank accounts. In the opinion of many who have attended all the local shows of the year, the Boston exhibit stands pre-eminently at the head.

The chief features were chronicled in Motor Age last week, and there was nothing during the week which caused a change in the statement made then that this was the greatest show ever held in this city. During the exhibition many of the most prominent automobile manufacturers and managers visited Boston and her show. Alexander Winton, accompanied by C. B. Shanks and Percy Owen arrived in the city on Monday, this being Mr. Winton's first visit to Boston dur-

ing the past 20 years. They were given a rousing reception and remained here for a couple of days.

Now that the show is closed and is a thing of the past talk about next season is being indulged in. Eleven dealers united in the expectation that even with Sympony and Horticultural halls, the exhibition at the command of the association is too limited, and the opinion is expressed that a year hence the exhibit will be held in Mechanic's hall, which is the largest obtainable building in this city. There is no question that it is much better to place all exhibits under one roof than to divide them between two halls, which naturally causes more or less confusion among visitors, as well as no end of trouble for the management. Manager Campbell, who had charge of the exhibition, is today receiving the congratulations of every one who had anything to do with it. The show committee, consisting of W. E. Eldridge, Harry Fosdick and George H. Lowe, is likewise to be congratulated for its excellent work.

As a result of the recent visit of F. A. La-Roche to this city, a Boston branch of the Darracq has been established here. Mr. La-Roche appointed Kenneth A. Skinner as his Boston agent, and hereafter the Darracq will find a good home in his garage, as well as places in the private garages of some of the best known Bostonians.

During the show orders were received for half a dozen Napiers of the six cylinder variety, the great majority of which are to be delivered abroad. C. J. Glidden, George W. Morrill, Otto B. Cole, and Harry D. Corey are four of the gentlemen who have placed orders for the six-cylinder machines, all of

which are to be delivered to them in London, as they are going to Germany to witness the Gordon Bennett international cup race.

W. H. Stimson has accepted the agency for the Eldredge car and has established his headquarters on Columbus avenue.

The Masachusetts Automobile Club is to hold a race meet at the Readville track May 30, the sanction having been received from the racing board of the A. A. A., and the track having been leased by the club. This sets at rest all statements as to whether or not there will be a race meet there this season. At one time it looked as though the club would let the meet go by the board, but the moment the racing committee for the year was appointed by President Eliott, work was commenced towards the holding of one. Chairman Wallace went to work with a will, and last week announced that the annual competitions would be held and that there would be special races for particular makes of cars. He also stated that the hill climbing contest will be held on Commonwealth avenue hill on Patriots' day, which insures the holding of two big outdoor automobile events of the year. During the show Mr. Wallace interviewed the majority of the visiting makers and secured from them the promise of entry of their machines for these two contests.

During the week of the show a meeting of the delegates from the leading clubs in New England was held at the rooms of the Masachusetts Automobile Club, at which the New England Automobile Association made arrangements for the tour from Boston to St. Louis during July. The officers elected were: Chairman, Charles J. Glidden; vice-chairman, L. H. Greenwood; secretary, J. C. Kerrison, and treasurer, Frederick R. Tibbitts.

The following itinerary for the St. Louis trip has been roughly prepared, subject to slight changes:

Monday, July 25—Leave Boston from Copley square at 9 o'clock. Lunch at Worcester —45 miles—where Providence, New Bedford, Marlboro, Brockton and Fitchburg clubs will join the run. Continue to night stop at Springfield—107 miles.

Tuesday, July 26—Leave Springfield from in front of headquarters at Massasoit hotel at 9 o'clock. Lunch at Pittsfield—53 miles. Continue to night stop at Albany—92 miles.

Wednesday, July 27—Leave headquarters at Ten Eyck hotel at 9 o'clock. Lunch at Fonda—45 miles. Night stop at Utica—100 miles.

Thursday, July 28—Leave headquarters at Bagg's hotel at 10 o'clock. Lunch at Chittenango—34 miles. Side trip through White Sulphur Springs to Cazenovia—10 miles—if

desired. Continue to night stop at Syracuse —50 miles.

Friday, July 29—Leave headquarters at Yates house at 9 o'clock. Lunch at Lyons— 47 miles. Night stop at Rochester—82 miles.

Saturday, July 30—Leave headquarters at Powers' hotel at 9 o'clock. Lunch at Batavia—35 miles—where the New York section joins the run. Proceed with it to night stop at Buffalo—73 miles. Total run for the week, 504 miles.

Sunday, July 31—Stop in Buffalo, with optional side trip to Niagara Falls—22 miles—with lunch there and return in the afternoon.

Week beginning Monday, August 1—Proceed with the New York section as per main line route through Erie—94 miles, Cleveland—110 miles, Toledo—123 miles, Waterloo—93 miles, South Bend—76 miles, to Chicago—102 miles—where Sunday, August 7, will be spent. Total run, Buffalo to Chicago, 593 miles.

Week beginning Monday, August 8—Continue through Bloomington—126 miles, and Springfield—60 miles, to St. Louis—102 miles, ariving there Wednesday night, August 10. Total run, Chicago to St. Louis, 288 miles.

Thursday, August 11—Grand parade through the city and fair grounds to some point in the grounds where the cars will be stored.







The season of automobile shows is over. At the national capital the circuit is ended. The exhibitions have all been successes. At least the exhibitors say they have been. There is now a great interest in automobiling. All the various shows have proved its being. The attendance has been remarkable. Automobiles are wanted by all the people. The shows clearly indicate this demand. A good rest has been earned by the trade. The rest, tho', is a relief and a satisfaction. Automobiling has learned its greatness.

從 從

The city attorney of San Francisco has rendered an opinion which is interesting whether of value or not and which opens a question of close distinction. He says that if an automobile is sold upon the statement that it will run, say, 20 miles an hour, it must not only be able to run at the rate of 20 miles an hour for 1 mile, but must be actually capable of negotiating the full 20 miles in 60 minutes if the purchaser is held to his agreement. Such a meaning put upon common claims, if backed by legal decision, might work a hardship here and there, but it might also tend to lessen extravagant claims of overenthusiastic salesmen. A ruling of the kind, however, might eause endless wrangles over the conditions of travel under which the prescribed mileage should be made and over the degree to which accident and other unforeseen contingencies should be considered.

100 100

Every once in a while some one breaks into speech or print with an appeal for more carefully selected terms pertaining to what we now improperly and with great disdain for the consistent derivation of words call the automobile industry. The peculiar feature of the situation is that words will be what the public makes them, regardless of what the critics think they should or should not be. 'It is really immaterial whether we call the modern vehicle an automobile, a motor car or a pell. Such names at best will last only as long as they are a class by themselves, on account of the character of their power. After several years the purchaser of a vehicle will walk into a carriage emporium and say, "I vish to look at a doctor's stanhope." salesman will ask, "Gasoline or electric?" just as he might now ask, "For one horse or two?"

Carriages will always be carriages; wagons always wagons, and theater busses and furniture vans likewise. The character of their power will cease to classify; it will only qualify. If there ever comes a time of universal motive power it will cease to exist in the nomenclature of the vehicle trade. It would have been foolish 25 years ago for a man to have stepped into some big carriage repository and asked for a horse-drawn victoria. It will be just as foolish 25 years from now to walk into a vehicle store and ask for a motor surrey. He will ask for a gasoline surrey or an electric surrey or a steam surrey.

405 405

Madame du Gast is mad. She is shut out of the French eliminating trials because she is a woman; out of the English trials because they are to be run on the Isle of Man; and out of the German trials because she is French. Never mind, madame, there may be a chance to get onto one of the international cup race teams as chaperone.

#

By April 1 there will be just half as many American automobile papers in the country as there are American manufacturers in the Association of Licensed Automobile Manufacturers. When the A. L. A. M. has put a quietus on all outsiders its members can then pair off into teams with a paper apiece!

烂 烂

For versatility it is hard to beat John Farson, C. A. C., A. A. A., A. C. A., A. M. L., of Chicago. Servant girls, neckties, church bazaars, automobile shows, automobile driving, good roads-it is all alike to him in discussing the subject with keen wit and graceful

災 災

Automobile Topics announces that from pure love of the industry it will boost it along with an issue of 50,000 copies. Either the industry, the second-class matter division of the postoffice or Topics is going to be very much

烂 烷

Now that the Europeans have been convinced that Willie K. really did make that mile in :39, they are beginning to remember lots of unofficially timed practice spins they have made in :36, :37 and :38. 435 49.5

Governor Yates, of Illinois, in writing on the topic of road improvement, says he is not aware that the movement has taken definite form in his state. Nor will it ever take form, Governor, unless somebody wakes up!.

95 95

If anything will remove the solemnity of the Egyptian sphinx it will be the automobilist wrestling with a bad case of ignition, poor carburation, or some other equally aggravating cause for stopping. 烂 烂

Up to the hour of going to press the eastern press representatives had not consolidated the A. A. and any other organization for an entire week.

President Potter of the A. M. L., having recovered from the transportation fever, is now sawing wood, just by way of exercise.

流 流

Now that the Association of Automobile Engineers has been formally organized we may hope for standardization once more.

烂 烂

The Chicago dealers have resolved to refrain from giving any discount to either the weather

man or the ground hog. Motorists in general approve this action.

姓 姓

One to 20 Jenatzy against the field-how does that sound?

浜 浜

Would it be consistent for a horse doctor to use an automobile in his practice?

從 從

The eastern automobile-boat press agents have been losing their holds of late. Has the novelty worn off so soon?

烷 烷

If the state of Illinois abandons the old Illinois and Michigan canal, which extends from Chicago to La Salle, Ill., why not turn it into a state boulevard?

烂 烂

The unfortunate automobile world girdlers who abandoned their trip and their misnamed Passe Partout in Siberia can now sympathize heartily with the Russian government.

烂 烂

The race course for the German international cup race eliminating trials passes through Bahnubergang bei Lockstedter Lager. That ought to eliminate all of the contestants.

災 災 The automobile has come to stay. There is no doubt of it. MOTOR AGE last week received three "stories" from would-be contributors, two catalogues, one postal card and one prospectus of an automobile school, the first sentence of each of which was that very clever statement.

Representative Sibley, of Pennsylvania, who is one of the several millionaires in congress, is one of the most enthusiastic automobilists in Washington. At the capitol the other day some one asked him how fast he had ever driven his Winton touring car. "Up in Pennsylvania one day last summer," he said, "I rode so fast along a narrow road, upon one side of which was a corn field and on the other a field of beans, that the suction of my big car literally covered me with succotash."

姓 姓

It is worth while to read the official bulletin of the American Motor League in MOTOR AGE. The A. M. L. is an organization whose works depend upon its strength. Its strength depends upon its membership. Its membership depends upon interest. The official page is conducted by the league to arouse interest in those who are not members and to sustain interest in those who are members. It tells of the work of the league. An automobilist helps himself by helping in the work of such organizations as the American Motor League. He should be interested in it.

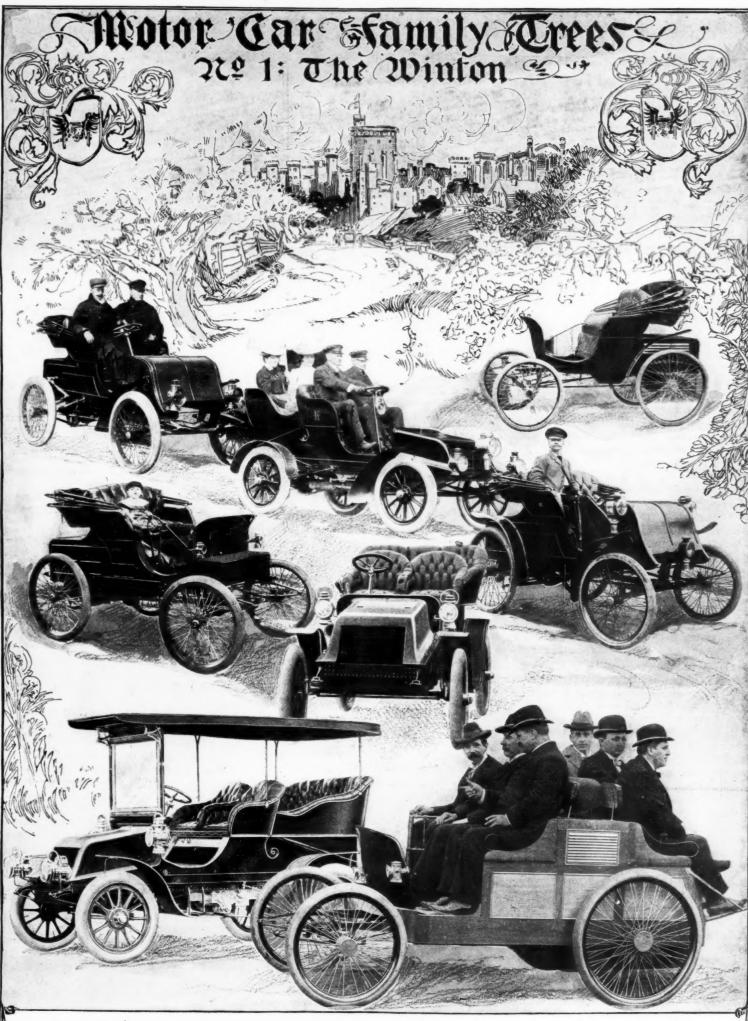
St. Louis has a \$10 license fee for automobilists.

It is not only outrageously unjust and illegal, but apt to do the city and the fair an injury.

The motorists of St. Louis are few in number and apparently somewhat inactive in permitting this objectionable ordinance to remain in full force and effect.

If the many automobile tours scheduled to land in the exposition city are to be anything but mere nothings the fair officials and the motorists of St. Louis must become more active than they are at present.

The great caravans of motor cars will be immense advertising mediums; the industry demands that they shall not be interrupted by a senseless ordinance, and the makers should join hands with the motorists and fair officials to kill the law, temporarily, at least.



The 1901 Wheel Steer Phaeton The 1899 Phaeton The 1904 Canopy Top Touring Car

The 1902 Touring Car The 1903 Touring Car The First Car Placed On the Market—1898
The 1901 Lever Steer Phaeton
The First Practical Winton Motor Carriage

WASHINGTON THE MOTORIST'S PARADISE







MOTOR AGE



Looking West from the Capitol

ASHINGTON, D. C., March 10—Washington, the city of magnificent distances, and capital of the nation, is a great automobile center, and the advantages enjoyed by the devotees of the motor car compare favorably with those of other great cities. The popularity of the automobile has increased a hundredfold during the past 2 years and the motorists are now a recognized factor in municipal affairs.

The capital has many miles of asphalt pavement and ranks near the top in the list of cities with the greatest area of this surface. The plan of the city is symmetrical. The capitol and white house are two centers from which radiate broad avenues. The streets vary in width from 80 to 160 feet, and many of them are completely arched by trees throughout their entire length; the motorist can ride for miles over smooth asphalt pavements of one street after another, and, looking straight before him, see the long perspective of green arches running away into the sky in the distance. Pennsylvania avenue is the great artery of the city; it is nearly 5 miles in length, and has been the scene of many notable parades. This great thoroughfare is filled with machines at all times and it is by riding up and down the avenue that one can get a good idea of how many automobiles are in daily use

The public park system of Washington, while it is not very great in extent, is artistically laid out and affords some interesting rides for the motorist. That part of the park system extending from the capital to the Washington monument and known as the mall, embracing the grounds of the botanic gardens, national museum, Smithsonian institution, and agricultural department, is a favorite ride. The roads are all of the smoothest macadam and at intervals there are delightful shady nooks. The mall terminates in an ellipse at the rear of the white house. This ellipse is % of a mile in circumference and the surface is as smooth as asphalt. An effort has been made to have this ellipse set aside for the exclusive use of the automobilists for speeding purposes, but so far the privilege has not been granted. Automobilists congregate on the ellipse in numbers every Saturday afternoon to hear the concert rendered in the president's grounds by the United States marine band.

The environs of the capital afford a number of interesting and picturesque rides. One that attracts many automobilists is the soldiers' home. The grounds comprise about 500 acres of beautiful diversified hill and dale, to which the public has free access at all times. There

are more than 7 miles of broad, well-made drives, shaded with gigantic oaks with luxuriant foliage. Silvery lakes are interspersed with stretches of meadow and picturesque arbors on the hills give charming vistas of the land-scape for miles around, while pretty villas and statuary add to the beauty of this park.

A half-hour ride from the capital through a picturesque country brings the automobilist to the quaint old town of Bladensburg, which was founded in 1750, and named after Thomas Bladen, at one time governor of Maryland. Here, in 1814, General Ross brought up his flotilla, and the English redcoats, after sailing up the Anacostia river, disembarked just below the bridge and advanced toward the capital. A little to the right, before reaching the bridge, is the ground that often witnessed meetings made necessary by the "code of honor." Some duels that are famous in history were fought on this ground. The ride to this old-fashioned place is a very enjoyable one.

About 2 miles from the city lies Rock Creek park, a vast tract of land owned by the government, which is being slowly improved. When it is completed it will be one of the finest parks in the country. South of the park are the grounds of the zoological gardens, which are laid out in finely graded roads that are the joy of Washington automobilists. The scenic beauty of the zoo is unsurpassed and when it is fully completed it will rival the famous Fairmount park in Philadelphia.

A ride that attracts many notable automobilists is that to Chevy Chase, a beautiful suburban place in Maryland, a few miles northwest of Washington. The Chevy Chase Club, two golf clubs and a hunting club, have their headquarters there, and the favorite way of reaching the place is in automobiles.

Apart from the many objects of historical interest, the ride to Arlington presents attractions in the great beauty of the scenery;



MOTOR AGE Washington as seen from Arlington

it is one of the most interesting rides in the itinerary of the Washington automobilist. Arlington, which faces the Potomac river on the Virginia side, was long famous as the home of the Custis and Lee families, two of the most notable families in Virginia history. It is now used as a national cemetery, and over 16,000 soldiers of the war are buried there. The grounds are laid out on a magnificent scale, with fine macadam roads winding in and out among the famous monuments. The view from the heights overlooking the city is a grand one. A short distance west from Arlington is Fort Myer, a cavalry post. Every Friday afternoon the troops give an exhibition of riding that is little short of marvelous, and hundreds of automobilists ride out to see the performance and hear the music of the mounted band.

Eight miles from the city on the Conduit road is Cabin John bridge, one of the most noted structures ever reared by the hand of man. The bridge, which was built by the government for the purpose of conveying the water supply to the city from Great Falls, Md., enjoys the distinction of being the largest single arch span in the world. The place derives its name from an old recluse known as John of the Cabin, who lived in a hut far away from civilization at a time when the city of Washington was an infant. The Conduit road is a government road and is always kept in excellent repair. The "bridge" is a favorite rendezvous of Washington automobilists and during the summer months hundreds of motorists ride out there every day.

Aside from the numerous haunts of the automobilists in the immediate vicinity of the city, there are many delightful rides through Maryland and Virginia that automobilists who know the joys of touring are fond of taking. The trip through the Shenandoah valley is a favorite one.

ROCHESTER'S COMPOSITE SHOW

Rochester, N. Y., March 21—With the "honk, honk" of automobile horns that seems to have become proverbial with automobile show story writers, Rochester's first automobile show was opened in Fitzhugh hall tonight. A composite show it is and even the automobile horns could not proclaim it an exclusive motor car show, for bicycles and sporting sundries take up half of the exhibition space. The new models of motor vehicles, ranged in the center of the building, however, make a pretentious display for a small, local show, and the good natured crowd which fills the building about 8 o'clock seems to find more interest in them than in

all the other things which are on exhibition. The show is well attended and though for the most part the crowd was composed of plain, every-day seekers after amusement of some kind, there was a goodly number with a more serious turn of mind who desired to delve into the intricacies of motors, cranks and other incidental points of complicated mechanism which go to make up the automobile. Among these might be numbered the prospective buyers and as each exhibitor has a corps of competent assistants on hand to explain the incomporable qualities and feature adjuncts of his respective machine the visitors were well taken care of. It was reported that several sales were made during the evening.

The hall is very tastefully decorated with American flags and bunting and here and there a huge bouquet of flowers grace an automobile. In the north gallery is located a band of fifteen pieces, which plays selections every few minutes.

To enliven the proceedings the management put on home trainer bicycle contests between a couple of profesional bicycle racing men. Another side show attraction was a working model of the de Forest wireless telegraphy system.

The automobile exhibit is not nearly so extensive as at the other local shows, but is fairly representative of the market inasmuch as it comprises all of the lines handled by the local dealers, a goodly quantity of parts and appurtenances, and several locally made cars.

The Rochester Automobile Club is on hand with a decorated booth and expects to do much recruiting during the week. The club is prosperous and anticipates a good season. The show inaugurates its summer campaign.

Altogether the exhibition is a pleasant affair—not in the running wth other shows, but good for its kind and prospectively a profitable venture both for the management and the exhibitors.

NEW GARAGE FOR WASHINGTON

Washington, D. C., March 19-The large garage of the National Capital Automobile Co., in the rear of the company's office at 1120 Eighteenth street, has been found inadequate to the proper handling of the company's growing business, and in consequence plans are being perfected for a new garage. If the present plans are carried out this garage will be one of the finest in the country. Something like \$30,000 is to be expended and in addition to the other departments there will be reception rooms for both men and women, a library with files of the leading automobile papers, a chauffeurs' room, baths, private lockers and other conveniences. Manager John Wood has several desirable sites under consideration and it is expected definite action will be taken immediately after the automobile show.

AFTER VANDERBILT'S RECORD

Baron Pierre de Caters has inspected different Belgian roads for the purpose of finding a suitable stretch to go after the mile and kilometer records. He has found one which is supposed to be superior, as to speed possibilities to the Dourdan road. The Automobile Club of Belgium will have the road measured, after which Baron de Caters will try to break the Vanderbilt and Duray records. He will use a new Mercedes car, which will develop from 90 to 110 horsepower.

THE BITER WAS BITTEN

Washington "Doctor" Given a Demonstration Which He Will Very Likely Long Remember

Washington, D. C., March 17—All Washington is laughing at the trick played on an alleged army physician by three prominent automobile dealers of this city, thereby exposing one of the rankest frauds the national capital has seen in many a day.

During the past 3 weeks the dealers have been at the beck and call of "Dr." Hicks and his women friends. The doctor ever presented an imposing appearance. He was a swell dresser and money seemed to be no object with him. He wanted to buy a car, and he had friends who would buy the same kind of car he bought.

"Dr." Hicks formerly lived here. He dropped out of sight for some time, but when he came up to a business man on the street with whom he had formerly been on friendly terms and told him he was here to buy an automobile, was staying at the leading hotel, and contemplated a tour of the country, the business man had no reason to be suspicious.

The doctor was presented to a prominent dealer, and was soon riding about the city in a fine touring car, while the dealer was explaining the many talking points of the machine. The next day another dealer was visited and another demonstration followed. The doctor made the rounds of the trade, and each dealer felt sure of making the sale. When all the dealers had taken him out the doctor became uncertain and all the cars had to be demonstrated over again.

Occasionally the doctor was permitted to take a car out himself and to take his numerous women friends on little trips into the country. Finally he consented to order a car. In fact, it was learned afterwards that he had ordered several, but each from a different dealer. In no case did he make a deposit, but always gave a plausible excuse.

Finally the dealers became suspicious. A few chance remarks of one dealer to another led to a conference, and an investigation brought to light the fact that the doctor was a rank fraud. Instead of having a suite of rooms at a prominent hotel, as he represented, it was found that he was living in a back room over an F street business house.

Then the dealers determined to have dire revenge on the impostor for the trouble he had cause them. A stormy afternoon was selected. In a canopy top Toledo touring car the three dealers rode up and down F street looking for their victim. They found him, dressed as usual in a frock coat, with a silk hat and patent leather shoes.

"Jump in, doctor," they cried. "Got a new car here and want to give you a thorough demonstration. Just the thing you want. Swell thing for the city; knocks them all out in the country."

The doctor yielded. They pursuaded him to get his overcoat and then they rode out into the country. When they reached a spot agreed upon by them, unknown to the doctor—24 miles from the city, 12 miles from a railroad station, and 5 miles from the nearest house—they halted.

"Doctor, we want a picture of you in this car," they said. "It will help us in the trade." Very readily the doctor scrambled out

of the rear and took his place at the wheel. One of the party snapped his camera, but the picture was a failure. When the doctor alighted and leisurely prepared to resume his seat in the rear, the conspirators suddenly started the machine, and it was a hundred feet from the doctor before he knew what had happened. Then the spokesman of the party addressed the doctor thus:

"Doe, I'm sorry for you. You are 5 miles from the nearest house, 12 miles from a railroad station, and 24 miles from Washington, and you can't ride in this car. We're on to you. You've played us for suckers good, but you kept it up too long. Good-by." The car was started on the homeward trip just as the sun went down, with "Dr." Hicks standing in the muddy road, his fist shaking in impotent rage. The car reached the city safely an hour later, but it was 18 hours before the doctor reached the city limits, a sadder, but it is to be hoped, a wiser man. He has since left the city.

TOUR TO GETTYSBURG

New York, March 22—That the A. C. A. will have a club run tour next May to Gettysburg, embracing a visit to Atlantic City and Lakewood on the home journey, is now assured. The tours committee of the club met yesterday and laid out roughly a route and itinerary. The tour will last 8 days and cover about 475 miles.

The start will be made on Thursday, May 26, with Philadelphia—100 miles—for the first night's stop. York, Pa.—91 miles—will be reached the following evening, and Gettysburg—30 miles—the next morning. The tourists will spend Saturday and Sunday in visits to the battlefield. On Decoration day morning the homeward journey will begin. It is planned to reach this city on Friday, June 3. The intermediate stopping places and route in outline will be: Philadelphia, 121 miles; Atlantic City, 61 miles; Lakewood, 67 miles, and New York, 60 miles.

In view of the intention of the club to again permit an autumn tour the invitation of the A. A. A. to accompany one of its New York divisions partway on its journey was declined for fear of interference with the proposed run.

QUAKERS ELECT OFFICERS

The annual meeting of the Automobile Club of Philadelphia was held in the club rooms of the Manufacturers' Club last week. There was an informal discussion regarding plans for enlarging the scope of the club and making it more powerful. It is the idea of the club to cooperate with the Automobile Club of America, and to form plans for securing protection from unjust prosecution. Road maps of the state are wanted, and these will probably be obtained from the American Motor League, which is issuing maps of the kind desired. The following were elected as the board of governors: Isaac Starr, Jr., H. Bartol Brazier, Louis J. Kolb, F. C. Lewin, Henry G. Morris, J. Emlen Smith and Ellis Ames Ballard. There was only one change in the old board, Mr. Ballard being elected to fill the office left vacant by the resignation of Dr. A. D. Whiting, who declined to serve again. The time of service was fixed by drawing lots, Messrs. Smith, Morris and Lewin drawing 2-year terms and the others 1 year. A committee, with Howard Longstreth chairman, was appointed to nominate officers to be elected at the next meeting.

TRIAL RACES ARRANGED

Details for the English, French, German and American Gordon Bennett Eliminating Events Practically Complete—Many of the Drivers Already Named—Madam Du Gast Protests

All racing thoughts are now turned to Ormond, where the American team trials are to be held the latter half of April. Joe Tracy has been definitely chosen to drive the Peerless car in the international cup race. Three of these cars will be taken to Ormond and will be tried out by Tracy and Louis P. Mooers, their designer. A MOTOR AGE man hears from one who ought to know that there is small chance of Alden Sampson II presenting his car for trial. In this event the A. C. A. race committee may decide to send over two Peerless machines providing they prove up to standard.

姓 姓

The Gordon Bennett committee of the German Automobile Club has decided that the German eliminating trials will be run about May 15, over a circuit measuring about 31 miles, located in Schleswig-Holstein and passing through the following: Lubscher Brunnen, Schmabek, Bahnubergang bei Lockstedter Lager, Muhlenbarbeck, Lockstedt, Hennstedt, Meezen, Grauel, Hohenwestedt, and return to Lubscher Brunnen. The course will have to be covered six times, as the distance for the race has been set at 186 miles. The committee has informed manufacturers that their cars must develop an average speed of 44 miles per hour during the entire race.

Much satisfaction is expressed at the selection of the course, which is pronounced by many an ideal, and in some respects the finest in Europe. The stretch from Hohenwestedt to Lubscher Brunnen, which is about 14 miles long, is perfect. There is not a hamlet along this part of the circuit and as the road is large and in good condition it is expected cars will be run over it at maximum speed.

Burgomaster von Marx, of Homburg, concerning the accommodations that will be made for the press, said: "The press men will have a large and exclusive room near the start and finish. It has not been decided how many telegraph operators will be on hand, but you may rest assured that there will be a sufficient number to insure prompt service. All these operators know French, English and Italian, so that messages in any of these languages can be transmitted just as quickly as those in German. There will be an underground tunnel, which will greatly facilitate newspaper men in getting from one side to the other."

Von Marx said that he was greatly worried concerning the approach of the time when the raunus road will be open to the preliminary trials. Four weeks before the race the drivers in the race will be permitted to go over it for the sole purpose of getting acquainted with the turns and difficult stretches. An effort will be made to prevent fast driving and measures are being planned to secure the arrest of offenders. The hours for training on the road will be between 11 in the forenoon and 3 in the afternoon.

Asked as to what would happen if Germany wins the trophy, the burgomaster replied: "Then the race will again be run near Homburg next year, if no serious accident happens."

According to a Vienna paper, John B. Warden, a well known American motorist, generally residing in Paris, has been selected by the Austrian Daimler company to drive its third Mercedes car, the other two being cared for by Braun and Werner. Warden was made a member of the Austrian Automobile Club recently especially for the purpose of being eligible to drive in the race.

It has practically been decided by the prefect of the Ardennes department, in France, that during the eliminating race, all traffic on the circuit will be stopped for about 12 hours.

#

The residents of the Isle of Man are greatly pleased to have the British eliminating trials for the Gordon Bennett cup race held on that island and preparations are being made to appropriately celebrate the occasion.

The course which will be chosen is about 50 miles long and is circular in form. It is not a speedy course, but it will be a severe test of the skill of the drivers and the reliability of the cars. The road is full of twists and turns and a number of severe grades are encountered. There are only a couple of stretches of straight road where great speed may be attempted. The roads are well-kept and in good condition, the surface being nearly all steam-rolled granite macadam, with an average width of 18 feet. The principal towns along the route are Douglas, Laxey, Ramsey, Kirmichael, Ballakinnag, St. Johns and Ballasalla.

All cars intended for competition in the eliminating trials must be produced for in-

spection at the automobile club by noon of Saturday, April 16. Each firm entering shall contribute \$250 for the first car entered and \$125 for each additional car toward the cost of the trials. Each entry must be accompanied by a deposit of \$1,250, this deposit to cover any number of cars entered by any one firm.

After the selection trials, three cars and drivers and reserve cars and drivers will be selected by the club, it being understood that the selection trials are held simply for club guidance in making a choice, and the winner of the selection trials will not necessarily be selected to represent the club in the race. The names of the proposed drivers must be submitted to the committee of the club before the inspection of the cars, and the committee shall have the right to refuse any driver at its discretion.

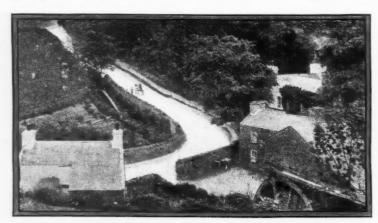
45 45

The decision of the Automobile Club of France not to allow women drivers to take part in the eliminating race, has divided the French automobile world in two factions. One calls it an outrage; the other thinks it the only course which could have been taken. Madam du Gast also protests against the decision, which she claims was directed solely against her, inasmuch as there is not another woman that has ever taken part in a race in

"In 1901 I took part in the Paris-Berlin race," said Madam du Gast, "although against the urgent request of the promoters. I did not kill a dog or even a hen. How about many of the male drivers? In 1902 the organizers of the Paris-Vienna race offered a special prize for women, simply to encourage them to take part in automobile races. I was again the only one to take part in the race, and again I did not kill a dog nor a chicken. How about the stronger sex drivers? Last year, in that sad-ending Paris-Madrid race I started twenty-ninth, was seventh at Angouleme and fifth at Montguyon, when I stopped to give assistance to M. Stead, who had been seriously wounded. Is it because I thus humanely showed what a woman's heart is that I am now deprived of participating in the greatest of all races? I protest, from the bottom of my heart, and think it is an injustice."

INITIATING THE SOUTHERNER

The Winton Bullet II, driven by Barney Oldfield, and old 999, formerly known as the Ford-Cooper racer, and now driven by Ed Hausman, are now being used in exhibition and match races in southern cities, and Saturday and Sunday, March 26 and 27, Oldfield and Hausman are scheduled to race in New Orleans. Each combination is under separate





Sharp Turns on the Picturesque Isle of Man British Trial Race Course

management, the report that both were being managed by Colonel Billy Thompson, having been a canard. Oldfield is under the racing management of his erstwhile racing partner, Tom Cooper, while Hausman is being managed by W. H. Pickens, who says he has purchased outright from Tom Cooper the 999 car.

Interest in these matches is enhanced by the fact that the car against which Barney rides now is the one on which he first rode into motor racing prominence, before he was engaged to drive the now famous Bullet, holder of the track records and a likely candidate for mile straightaway honors.

After the southern engagement Oldfield proposes to go to Ormond beach, Florida, for a try at this and other straightaway. marks. Both he and Hausman expect to be on hand in the east when the regular track season opens with the Decoration day meeting at New York. Oldfield's program for the season, as now ar-

TALK RACE IN THE EAST

Vanderbilt's Record-Breaking Mercedes Sold To Stanley Ormond To See More Speed Trials

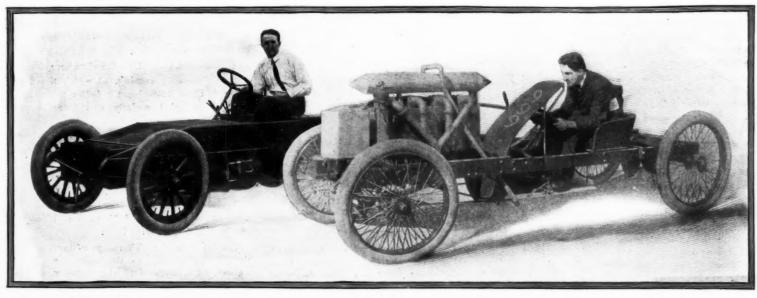
New York, March 21—William K. Vanderbilt, Jr., has sold his 90-horsepower Mercedes, which made the world's record of 39 seconds for the straightaway mile at Ormond last January. The purchaser is B. M. Shanley, Jr., of New York. Mr. Shanley's first purchase in the racing line was the Decauville 1,800-pound car in which Henri Page made the world's 15-mile track record in its class on the Empire City track last autumn. This car was also at the Ormond meet, but owing to its gear being out of kilter it did not do itself justice, being beaten by W. Gould Brokaw's Renault in a match race and failing also to make a showing in the open contests.

our own business. If they wish to try for records they would better have the Florida East Coast Automobile Association apply for a sanction for the trials and provide for the timing."

All idea of a race meet at Virginia Beach has not been abandoned. Word comes from Boston that E. B. Stevens and H. L. Bowden have agreed to take their Mercedes racers there should the beach prove fit and a meet be held. A dispatch from them states that Augustus Post, a member of the recent exploring party, who remained behind, has made a trip in his White touring car, 25 miles down the beach. He is quoted as saying that he found it in superb condition.

"All the loose sand had disappeared," said he, "and the beach was as hard and smooth as a wood floor. It will not rival Ormond for record speed, but will be popular for sprints of 5 and 10 miles."

Reports are in circulation of track racing to



Barney Oldfield on Bullet II

ranged, concludes with another trip to the Pacific coast in the fall, this western trip including appearances at Omaha, Denver, Salt Lake City, Seattle, Portland, San Francisco and Los Angeles.

ST. LOUIS TOUR PROGRESS

New York, March 22—In addition to the national committee to promote the concentrating A. A. A. tours, sectional committees are being organized. Their chairmen have been appointed as follows:

For the west, F. X. Mudd, of Chicago; for the middle west, G. S. Waite, of Cleveland; for New England, Charles J. Glidden, of Boston; for New York state, Herbert W. Smith, of Syracuse, and for the southeast, R. B. Scott, of Baltimore.

G. S. Waite has been added to the national committee. The New England committee is the first to be completely organized, and Mr. Glidden also has named his subcommittees, one of which will select the route from Boston to Albany.

ADDED TWO CLASSES

In the service test to be held April 4 to 9 by the Automobile Club of America the rules have been amended by adding the two classes for heavy trucks: Seventh class, to carry a dead load of 6,000 to 8,000 pounds; eighth class, to carry a dead load of 8,000 to 10,000 pounds or over. These heavy trucks will be placed in the service of a brewing company,

MOTOR AGE

After all, Mr. Vanderbilt's sale of his record-breaker is not so much of a surprise. It had accomplished its purpose and Mr. Vanderbilt has no fancy for track racing. Besides, the young millionaire, while at Ormond, gave M. Charley an order for a new Mercedes flyer of a higher power. It is believed to be Mr. Shanley's idea to enter his new flyer for the Vanderbilt 300-mile cup. This race is more than likely to be contested on Long Island. It is said that the Nassau county people under the new law stand ready to give permission for the race and in fact are bidding for it, offering a 50-mile circuit for its decision. Mr. Shanley will probably also race the great Mercedes at the Empire City course and other track meets.

There will be an exodus to Ormond next month for the eliminating trials. It is assured that Barney Oldfield will go to the beach at this time with the eight-cylinder Bullet for a try at the records. It is said that Henry Ford will also send Housman there with 999. There are rumors of other cars being taken there also for record trials—the new Baltimore-built Whipple flyer, a 60-horsepower Fiat of international cup pattern, to be imported by Hollander & Tangeman, and an eight-cylinder Buffum.

"Of course the beach is free to all at any time," said Secretary Butler, of the A. C. A., "and these would-be record breakers can go there when we do, but we will be attending to

Ed Hausman on 999

be promoted on nearby Jersey tracks. It is said that the old Guttenburg mile course, where America's first track meet was held, will be used for this purpose and that a lease of the Clifton track is being sought.

Joe Tracy, of the Peerless team, and H. B. Fullerton, of the Long Island Automobile Club, are to make a tour of inspection this week of the Warsaw county, Long Island, roads, with a view to choosing a course for the Vanderbilt 300-mile cup race.

B. M. Shanley, Jr., is reported to be willing to match his Vanderbilt Mcrcedes in a race against Oldfield and the eight-cylinder Winton Bullet. In the event of the match not taking place at Ormond it is probable that the rival machines will be brought together at one of the local track meets.

MEETS FOR THE PACIFIC COAST

San Francisco, Cal., March 16—At the next meeting of the board of governors of the Automobile Club of California it will be decided whether or not an automobile race meet will be held in this city in May. The Automobile Club of Southern California is planning to hold a meet in May, at which it will endeavor to have Barney Oldfield and several other eastern racing men. The southern automobilists are anxious for the local club to hold an event either before or after their races. The annual automobile race meet at Del Monte will probably take place early in August.

ASSOCIATION IS ACTIVE

New York State Organization Doing Good Work in Many Directions —Work on Uniform Bills

Syracuse, N. Y., March 21-Reports presented at the meeting of the directors of the New York State 'Automobile Association Saturday showed that in less than 3 months since the body's organization about 1,500 automobilists of the state have enrolled, with prospects of large additions to the membership within the next few months. The association was incorporated December 26, and the fact that so many have already lent their support to the new organization is taken as a most encouraging sign. One of the most important matters acted upon by the directors was the consideration of the Hill-Cocks bill. The measure has within the past few days been taken back from the floor of the senate to the assembly.

A general consultation of automobilists will be held at Albany with a view of securing uniform legislation for all cities and villages of the state, thus doing away with local restrictions. Many tourists and particularly long distance automobilists have in the past found it almost impossible to conform to the varying speed regulations of the different towns through which they pass, and the state body has decided to do everything in its power to bring about the adoption of a thorough going general law.

The only action taken by the directors with reference to the great club run to St. Louis in July was the adoption of a resolution to the effect that the state association co-operate with the national body.

Emerson Brooks, chairman of the good roads committee, suggested a radical change in the present method employed by the state in building highways, providing for a bureau of highways to be in charge of a competent engineer. Mr. Brooks contended that the same specifications should not be used in the construction of clay, sand and dirt roads, as set rules do not apply in all the work.

The election of officers to serve until April 1, 1905, resulted in the choice of Judge Hotchkiss to succeed himself as president and of Frederick H. Elliott to continue in the office of secretary-treasurer. Judge Hotchkiss again heads the executive committee, which consists of the officers and the chairmen of the legislative, membership and good roads committees.

With reference to the automobile races planned to be run again this year in connection with the New York state fair, Chairman Pardington, of the racing board of the A. A. A., stated that no request had as yet been made for the reserving of a date, but that pending such action he would set aside Saturday, September 10, as the desirable day. Mr. Pardington, Emerson Brooks and H. H. Mundy were given a dinner at the Century club Saturday night by Messrs. Smith and Elliott.

Articles of incorporation for the Central New York Garage Co. were forwarded to the secretary of state Saturday. The capital stock to begin with is \$10,000. The officers and directors are: President, Edward I. Rice; vice-president, C. C. Truesdell; secretary and treasurer, C. W. Barker; general manager, George Erwin DeLong. The temporary headquarters of the concern, which is to deal in automobiles and automobile boats, is at 311 East Fayette street, in the place formerly occupied by the now defunct Central City Automobile Co., but the Central New York Garage Co. has just leased the building in South Warren street formely occupied by the Syracuse Automobile Co. It also has a large repair and storage shop at 310 Harrison street, giving it a total capacity of 100 machines.

QUIET IN BUFFALO

Buffalo, N. Y., March 21-Matters automobiling have been very quiet since the conclusion of the show, partially on account of the winter conditions which so persistently stay with us and partially on account of the majority of the cars exhibited here having been shipped to the Boston show. Very few of the dealers have been able to make any deliveries. The D. H. Lewis Co., however, representative of the Rambler, appears to be in a good position in this respect, and made several deliveries last week. These are the only deliveries that have been made in Buffalo this season with the exception of the George N. Pierce Co., which is delivering cars as fast as it is possible for the factory to turn them out, and those by the Thomas company, which has been equally energetic.

The Adams Express Co. placed a number of electric wagons in Buffalo last spring, and while it was no surprise to the public to see them do the work up to the time the snow came, it has been quite a revelation to see them do the work satisfactorily throughout the winter. There is no question that it has converted thousands of Buffalonians who have been prejudiced against the automobile.

DAWSON SUFFERS BY FIRE

The automobile factory of the J. H. Dawson Machinery Co., at the corner of Canal and Washington streets, Chicago, was destroyed by fire last Friday night. The three upper stories, which were occupied by the automobile department of the company, were completely gutted and nothing but a charred mass of junk is left of the automobiles which were in course of construction.

The lower floor was filled with machinery and this was damaged by water. There was no insurance on the automobile department and the loss on this is total. The entire loss is estimated to be about \$35,000.

The company had a number of orders for automobiles, and these will, of course, have to be cancelled, as it will not possible to fill them this spring. The work of rebuilding will begin at once, and some machines may be turned out later in the season.

MAY REFUSE ADVERTISEMENTS

A newspaper publisher has a right to reject an advertisement, even when the advertiser offering it has a contract with the paper for advertising space, according to a recent decision of an English court. The Autocar, of London, received copy for an advertisement from an automobile company in which the statement was made that the company was "the largest manufacturer of component parts in the world." The publisher alleged that this was not a fact and refused the advertisement. The company brought suit to compel the publication according to contract. The court found for the publisher, sustaining his right to reject the advertisement, but the company was awarded \$250 damages.

ROUSED FOR GOOD ROADS

New York-Chicago Highway Association Holds Enthusiastic Meeting at Erie-Government Aid

Erie, Pa., March 19—There was a large gathering of good roads enthusiasts here Wednesday and Thursday at the meeting of the New York and Chicago Highway Association. Over 300 delegates from various parts of the country were present, and the work accomplished will do much to forward the good roads cause throughout the United States. Erie is a sort of hotbed of good roads ideas, and the citizens take great interest in anything that will help the cause along. The members of the chamber of commerce are especially active along this line, and their greeting to the delegates was most enthusiastic.

Colonel Albert A. Pope presided over the sessions of the convention and on the opening day made a rousing address in behalf of the cause. Senator Latimer, of South Carolina, and other good roads promoters also spoke on the first day.

A banquet was held at the chamber of commerce Wednesday evening, at which the delegates and the hosts became better acquainted as they mingled socially and interchanged views.

The chairman was given the power to appoint sub-committees in each county through which the New York and Chicago highway will pass, these committees to co-operate with the association in its work. The association will assist in obtaining legislation in the various states and secure both state and federal aid in building the roadway.

The final session Thursday afternoon was devoted principally to the address of John Farson, of Chicago, first vice-president of the association, who spoke on the advantages of an interstate system of good roads. A short talk by Sidney S. Gorham, chairman of the good roads committee of the Chicago Automobile Club, preceded the address of Mr. Farson. Mr. Gorham has taken up the good roads work and will push it vigorously in Illinois.

Some of the chief points in Mr. Farson's address follow:

It is now almost exactly a hundred years since the nation saw the first fruition of this movement in the great national road. A century has now elapsed since the beginning of work upon that great improvement, an enterprise which engrossed the attention of our statemen for years and drained the federal treasury of millions of dollars. Will it be a coincidence, certainly a most fortunate one, that as the beginning of the nineteenth century saw our first national advance in road building, so the beginning of the twentieth shall mark another and even more decisive epoch in the same movement?

The question now uppermost is not "Shall we have good roads?" but "How shall these roads be built; what part shall the national government have in the work?" We may well ask ourselves if the federal government has acted wisely in lending its aid to great railroad systems, in assisting the manufacturing and commercial industries of the nation with a prodigal hand, and at the same time withholding its support from the development of country roads.

Of what avail would be any development, how-

Of what avail would be any development, howsoever great, in manufacturing, agricultural and mining lines, without roads for transportation of the products? If there be roads, but if they are poor and inefficient, how vast is the damage to all these industries that are the sustenance, the very life of the state?

What we are striving for now is not a great national road, such a road as the national highway of a century ago; what we need now is a

system of roads permeating every state of our great country.

If the state and the national government are the more prosperous under better road conditions, should not the state and the national government bear their share of the cost of producing these better conditions? There is no more reason why a country road should be paid for by the farmers living near it than that an improved city street should be paid for alone by the owners of abutting property.

Governmental aid is even more than a matter of right and justice, however; it is a matter of stern necessity.

Illinois is only an example of what is true throughout the land. What is needed in Illinois is needed elsewhere. A division of the cost of road construction, by which the national government shall pay one-half the expense of improving roads throughout the nation, the other half to be borne by those directly benefited in such manner and in such amounts as may be determined by the different state legislatures.

The effect of good roads has been not only to help banish discontent from the farmers, but also to brighten the lives of all classes of citizens. It is not too much to say that an era of good roads will bring with it an era of optimism.

NICE WEEK EVENTS

The annual automobile meeting at Nice, France, which is really the opening of the racing season in Europe, began Saturday and will continue for 9 days. The principal events occur March 28 and 29. On the first of these days, the two Henri de Rothschild cup races will be run over a distance of 1,000 meters on the Promenade des Anglais. The first cup is reserved for cars weighing from 1,430 to 2,200 pounds and carrying two passengers. Last vear Leon Serpollet became owner of the first cup given by Rothschild for having won the event 3 years in succession. The new cup is similar in design to the first one. The second trial for the second Rothschild cup will then be run and is reserved for cars weighing more than 1,430 pounds and less than 2,200.

On the second day the Baron de Caters cup will be run over a course of 1 kilometer, standing start, on the Corniche road, where the grade is 10 per cent. There are no conditions concerning weight or horsepower, the only requirement being that the cars must start on their own power. The competitor who has won the event twice becomes the owner of the cup. Serpollet won the race in 1902, in 591-5 seconds, and Rigolly won last year in 501-5 seconds on the Laffrey hill course.

The mile race will also be run March 29 and is open to five classes of vehicles, those weighing less than 110 pounds; those weighing from 110 to 550 pounds; those from 550 to 880 pounds; those from 880 to 1,430 pounds, and those from 1,430 to 2,200 pounds.

OPPOSES PARIS SHOW

S. F. Edge, of London, England, is of the opinion that the time has come when English manufacturers should cease to exhibit in Paris. He says that in view of the extraordinarily successful automobile exposition at the Crystal palace, and the fact that it was of a far more international character than the Paris showor any other show yet organized-this action should be taken. He claims that it is not advantageous to the English manufacturer to show his new models in Paris first, as that merely helps to increase the automobile prestige of France. On the other hand, the French manufacturers must show their models in England because the English market is large enough to demand attention. This course would then make the English show of a distinctly international character.

WORK NIGHT AND DAY

Factories at Hartford Unable To Keep Up with the Heavy Demand— Boston Show the Cause

Hartford, March 21.—That the automobile industry is active in Hartford is shown in the announcements of the Electric Vehicle Co. and the Pope Mfg. Co. to run their respective factories 24 hours a day, beginning today. The Electric Vehicle Co. starts with the force divided and with 200 more men put to work, while the Pope company will greatly increase its force during the next few days. Even with this added working force difficulty will be encountered in keeping up with the work.

"Since the first of February we have booked more orders than our gross business for the year 1903, and that was the largest year in the 10 years' history of this company," said President Budlong.

"Our agencies are crying for cars faster than the facilities of the factory will allow," says General Manager Charles E. Walker, of the Pope company.

The hum of industry is heard in the factory district, not only at these two factories, but at other factories which feel the benefits and are at work upon special machinery and parts to supply the trade. The advance orders of the Electric Vehicle Co. are unofficially reported to aggregate \$750,000 at this time and agents are reporting big business daily.

When it was thought that the show trade was about in, the Boston exposition has literally flooded the Hartford factories with orders and it was following this appreciation for Hartford products that night work was decided upon. While many purchasers are crying for deliveries, hosts of others follow who do not stipulate upon delivery and who are anxious to have their orders filed for delivery at the best endeavor of the factory. To the advertisements for help willing hands have come from all over New England, for the trade situation is occupied, with work for even more room. chine work.

The Hartford Rubber Works, too, is feeling the effect of the automobile interest throughout the country and is running with its full complement of hands. At the rubber works it is reported that the two new tires recently brought out are very popular so early in the season and that every bit of the great new factory built during the present winter season is occupied with work for even more room.

At the factory of the Whitney Mfg. Co. in the Colt's district, the introduction of a new cotter pin chain has meant a lot of new business and much more work. The company is now running with a large force. With the anticipation of much work in the automobile paint shops carriage painters from all parts of the country are working their way toward Hartford and many will be taken on next week, when the painting of the assembled jobs begins. This being the busy season with carriage painters, they are commanding bigger wages than ever known hereabouts.

MOTOR CYCLE ENDURANCE RUN

Just a trifle short of 750 miles is the distance of the road from Paris to Bordeaux and back, over which the Autoeyele Club of France will hold its endurance run. The first day's run is from Paris to Tours, approximately 160 miles, while the 213 miles separating Tours

from Bordeaux will have to be covered on the second day. The return trip will be over the same road.

Only touring motor cycles will be allowed to compete, and they will be divided into two sections, one for single seated machines and the other for tandems, or for single machines with fore or rear carrier. The motor, carbureter, frame, fork and hubs will be stamped before the start, and may not be changed, under penalty of disqualification. The entire run must be covered within 55 hours, not including the official stops. Machines must be fitted with mufflers, mudguards and brakes. The classification will be made by points, fifty of which will be awarded for the regularity of running on each control.

RECENT INCORPORATIONS

Washington, D. C.—Schaum Automobile Co., capital \$300,000. To do a general automobile business. Incorporators, Edward C. Bryan, Howard O. Cook, Fred G. Norris.

Camden, N. J.—The Marine Engine & Auto Motor Co., capital \$500,000. To manufacture, buy, sell, repair and rebuild marine automobiles, engines, etc.

Indianapolis, Ind.—Kiler Motor Mfg. Co., capital \$25,000. To sell motors, pumps and devices used in pumping or storing fluids. Incorporators, Ed N. Hill, Charles M. Kiler, H. O. Winter, W. B. Hill, E. J. Drumm.

Toronto, Can.—The American Motor Car Co., capital stock \$50,000. Incorporators, Milton and Nelson Good, T. Neuher, Jean Good, Margaret Good.

Youngstown, O.—The Mahoning Motor Car Co., capital \$25,000.

HILL-CLIMBING RACE IN FRANCE

The Provonce, France, hill-climbing test, over a course of 500 meters, was held March 6. Owing to rain and muddy roads many of the competitors who were on hand with their machines did not start, only twenty-five cars and six motor cycles contesting. Mamain, on a Griffon motor cycle, won the heat for machines of less than 21/2 horsepower, his time being :50 4-5, nearly 16 seconds faster than that of the second man. Naso, on a Peugeot, won the heat for more powerful machines, his time being 44 seconds. In the heat for motor cars of less than 5 horsepower, Guerin, on a 41/2horsepower Peugeot, was an easy winner in 1:36 4-5. A 6-horsepower Cottereau car, driven by Aubert, won the heat for cars of from 5 to 8 horsepower in 1:241-5. Three de Dion-Bouton cars took the next three places. A 12-horsepower Rochet-Schneider, driven by Roustan, won the heat for cars of from 8 to 15 horsepower, in 1:10 4-5. A de Dion-Bouton was second in 1:112-5 and a Richard-Braiser third in 1:12. Hanselin, on a 20-horsepower Rochet-Schneider, won the heat for cars of more than 15 horsepower in 50 1-5.

RECEIVER FOR MODEL

Quite a surprise to the trade is the announcement of the placing of the business of the Model Gas Engine Co., of Auburn, Ind., in the hands of a receiver, for the company was thought to be strong financially. The receiver is Howard W. Mountz and he is endeavoring to make a definite statement of the condition of affairs as soon as possible. It is expected that the busines may be continued, as the company had a large gas engine trade and had entered the automobile industry with good prospects.

FRENCH FUEL CONSUMPTION TEST





The Creanche Car

MOTOR AGE

The Picardie Hill

HE FOURTH annual consumption and reliability test conducted by l'Auto, of Paris, was held March 3 to 5, inclusive. The principal innovation of this year's trials lay in the fact that, for the first time in France, the speed of the cars, based upon the speed permitted according to the laws, was taken into account in the final averages.

During the first day, tests were made of cars whose chassis were valued at less than \$2,400; those of a value of more than \$2,400 were tested the second day, while the last day was reserved to commercial cars exclusively. There were seven classes. Only regular passenger cars and commercial vehicles were admitted. The following items were taken into consideration: Consumption per ton of total weight; consumption per ton of actual useful weight, or load carried; regularity of running and average speed; speed on the Picardie hill, which was taken with a flying start going one way and standing start the other way. The times on the hill were taken for a distance of 546 yards.

There were forty-three competitors in the different events, of which seventeen took part in the 100-kilometer run from Suresnes to Corbeil and return on the first day. A record was established on this occasion inasmuch as all seventeen starters finished the course. The 100 kilometers were to be covered in not more than 4 hours, and an average speed of 25 kilometers an hour was required. Cars running at less speed were penalized. Two Peugeot cars won first and second places in the class for chassis valued at less than \$1,000. Creanche cars won in the classes for chassis valued



Chenier-Leon-Peugeot

MOTOR AGE

at from \$1,000 to \$1,600 and from \$1,600 to \$2,400. The Creanche car also made the best time in the hill-climbing test. Sixteen of the seventeen cars used gasoline as fuel; the other using ordinary kerosene.

The second day's test was for cars having chassis valued at more than \$2,400. The road and distance was the same as the first day. A feature was that half of the competitors, although on hand with their cars, backed out at the last minute. The Paris trade papers make much fun out of this and claim that it was due to the fear of possible defeat. The Peugeot and Automotrice cars were the three best place winners of the day.

The last day's competition, reserved to commercial vehicles, is claimed to have been the most successful and most interesting of the tournament. Sixteen cars were entered for this test, which was run over a distance of 60 kilometers. The cars were divided into trucks carrying less than 2,200 pounds; those carrying more than that weight; delivery cars carrying less than 1,100 pounds; those with from 1,100 to 2,640 pounds of load, and those with a heavier load.

The Peugeot truck made the best showing, not only in this particular class, but it's consumption average was the best of all the cars that took part in the 3-day test. With a load of 6,600 pounds, the truck weighing 3,696 pounds net, it covered the 37 miles at an average of 7.68 miles per hour on the level road, and of nearly 3\%4 miles on the Picardie hill, which has an 8 per cent incline. Only 33,808 pints of gasoline were used during the run.

An old 1900, two-cylinder horizontal motor Peugeot, belonging to Chenier & Lion, was almost as prominent as the victorious Peugeot truck. This old timer after having been run with ordinary kerosene on the first day and heavy oil on the second day, was run with napthaline on the third day. It consumed a little over 13 pounds of this napthaline, which means an expense of 24 cents for the 37 miles, or about .65 cents per mile. Although running on all 3 days it was really in the test only on the second day.

All told, every one seemed highly pleased with this annual competition. L'Auto intends to arrange a heavy commercial vehicle competition on a large scale later in the summer. In making the score upon which awards were

based the grading of the cars was done by general averages which represented points lost. As no possible maximum could be determined in such a test to use as a basis of performance by subtracting from it the number of points lost by each car, the scoring was done inversely, the car with the lowest number of points being awarded first; that with the next highest, second, and so on. Points were determined as follows:

CONSUMPTION PER TON OF TOTAL WEIGHT— The number of liters of fuel used divided by the total weight in tons and multiplied by the co-efficient ten.

CONSUMPTION PER TON OF LOAD—The number of liters of fuel used divided by the weight of load in tons and multiplied by the coefficient ten.

Speed—No penalization for cars running at an average of 25 kilometers an hour or over. Loss of points for cars not making this average determined by multiplying by the co-efficient twenty-five the difference between 25 kilometers and the average of speed made.

HILL TEST—Average of 20 kilometers required. For average of lesser speed lost points determined same as in case of speed on level but with co-efficient of five for flying start and of ten for standing start.

In determining the points for the commercial vehicles the same system was followed, with the exception that in the case of speed a minimum average of 15 instead of 25 kilometers an hour was established, and in the case of the hill climbing a minimum of 12 instead of 30 kilometers and a co-efficient of ten were used.



MOTOR AGE

Peugeot Car

The general average of each car was obtained by adding the points lost in each of the four items. Reckoned by this system the summary of results is as presented in the accompanying table.

The table makes some interesting comparisons in the way of relative efficiency of the different classes of cars in different points of service. Thus from it is obtainable the following list of best showings by classes:

In general average, the light delivery car class.

In consumption per total weight of car and load, the heavy truck class.

In consumption per weight of load carried, the heavy truck class.

In the matter of speed the classes of cars at less than 5,000 francs, cars over 8,000 francs, and light delivery cars tied at no penalization for not making required average.

In hill-climbing the light delivery class, being the only class to escape penalization for not making required speed.

Exclusively among the pleasure cars the best performances in all respects were by the cars in the over 12,000-franc class.

LA ROCHE SOLE IMPORTER

The American Darracq Automobile Co., of New York, F. A. La Roche manager, importer of the Darracq, wishes it stated that S. de Ireher, of Philadelphia, Pa., has nothing to do with the importation of Darracq cars, even from Germany, and offers in substantiation of the statement copies of letters from Adam Opel, of Russelsheim, German licensed maker of Darracq cars, to it and to de Feher, in the former of which Opel states emphatically that he has no business relations with de Feher and that he does not sell German-made Darracqs in America; in the latter that he does not care to enter into any business relations with de Feher.

ACCOUNTING ORDERED

New York, March 21—The Supreme Court of this state has just issued an order in the suit of the Electric Vehicle Co. against the Weston-Mott Co. on the Elliott patent for steering equipment for an accounting, commanding the defendants to make a sworn statement of their receipts from this source, in default of which the Electric Vehicle Co. is given the right to examine the books of the defendant corporation.

A. A. E. A. THE LATEST

The Association of Automobile Engineers of America was organized in New York city March 17. The officers are: President, A. L. Riker, of Bridgeport; first vice-president, Henry Ford; second vice-president, John Wilkinson, of Syracuse, N. Y.; secretary and treasurer, A. E. Birdsall, of New York. Only men engaged in automobile engineering are eligible to membership in the organization, which has as its object the interchange of ideas in automobile construction and the best development of engineering practice.

DANES ARE FROM MISSOURI

Before a final contract between the Danish government and the private company which has been granted the permission to establish an automobile postal service through Denmark becomes actual, the company must make a 3 months' trial. The cars must have motors of from 10 to 12 horsepower, be run with gasoline, average 12 miles per hour and must have three speeds.

SOUTH IS VERY ACTIVE

Nashville and Memphis Getting Thoroughly Interested in the Automobile - Motor Cycle Takes

Nashville, Tenn., March 19—Spring is coming fast, and with it an increased interest in automobiling throughout Nashville and middle Tennessee. Owners of machines are able to take long spins every day, but prospective buyers seem to be holding off until the weather becomes a little more settled. Two of the deal-rs in the city report sales, but business is not brisk as yet.

An increased interest in motor cycling seems

SUMMARY OF FRENCH CONSUMPTION TEST

Name of Car. Consumption per ton total weigh Consumption per ton of load Speed Hill, flying start Hill, standing start Flotal points Lotal points
CARS SELLING AT LESS THAN 5,000 FRANCS
Peugeot 64 211 0 81 155 511 Peugeot 69 205 0 77 181 532 Foulllaron 91 299 0 67 136 593 Boyer 64 423 0 58 182 727 Bolide 132 464 0 90 192 878 P. Roy 154 633 0 49 115 951 Average for class 95 373 0 70 160 698
CARS SELLING AT 5,000 TO 8,000 FRANCS
Creanche 67 238 0 13 38 356
Chenard & Walcker 70 323 5 59 136 513 Creanche 105 382 0 54 78 619 Vivinus 115 429 0 0 91 635 Vinot-Degulngand 92 531 0 72 155 792 Arles 114 451 0 72 155 792 Boyer 97 556 0 63 126 842 Average for class 93 416 1 37 97 644
CARS SELLING AT 8,000 TO 12,000 FRANCS
Creanche 75 349 0 0 83 507 Arles 72 283 0 41 120 516 Vinot-Deguingand.131 597 0 21 47 796 Average for class 93 409 0 21 83 606
CARS SELLING AT OVER 12,000 FRANCS
Peugeot
TRUCKS CARRY MORE THAN A TON
Peugeot 34 53 37 81 205 Bardon 54 126 75 108 363 Gillet-Forest 54 115 115 164 448 Average for class 47 98 76 117 338
TRUCKS CARRYING LESS THAN A TON
Gillet-Forest, 69 135 67 108 379
Aries
Aries
*Taken without account of last two, which were old cars not properly in class.

certain this year. A year ago not a single dealer in middle Tennessee handled motor cycles. Last fall one dealer entered the field and this spring another, Jack Suth, connected with the John W. Chester Co., has taken an agency and will push the sale of the two-wheeled machines. Mr. Suth will handle the Marsh and will have his sample machines on exhibition soon.

Several prominent automobilists continue to work on the proposed race meeting to be run at Cumberland park after the close of the spring running races.

Picturesque amemphis is unquestionably the most important city in Tennessee to the automobile trade, next to Nashville, and one of the most important in the entire south. It is the largest city in the state, has good roads within the city limits and more than 150 miles of good

turnpikes leading into the surrounding country. The increase of interest in the sport has been as marked here as in all other points in the south. A year ago there were ten machines in town and now there are more than forty. Next year at this time dealers predict that there will be at least 150.

There are three regular dealers of automobiles—the Tri-State Automobile Co., which sells Cadillacs; Memphis Auto Co., which handles the Olds, and the Brown & Polk Co., which sells Ramblers. There are also a number of "curb-stone brokers," but they do little business.

Memphis goes in for motor cycling more than many southern cities, and H. A. White, who has graduated from a bicycle to a motor cycle dealer, handles most of the business. He sells only the Indian, but has done big business and prophesies an increase of trade this year. In fact, all the dealers in the city are looking forward to a big year and are already having many inquiries and are making a few sales.

At the present time Memphis has no automobile club, but one is under consideration. In a short time one will be practically a necessity.

Races are also under consideration and will undoubtedly be pulled off this summer. Memphis is peculiarly fortunate in having two fine tracks, one for running horses and the other for trotters and pacers. The latter is one of the fastest in the world, as the work of Dan Patch—mile in 1:56¼—Lou Dillon and the other turf wonders proved conclusively last fall.

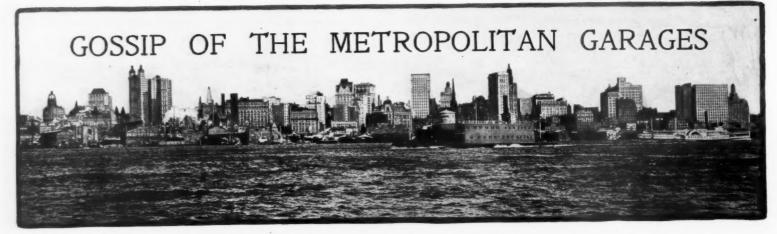
Memphis will undoubtedly send a delegation, of automobilists to the world's fair for the encampment. They will probably go to Nashville and be joined there by the delegation from that city.

INCREASE ITALIAN DUTY

The Italian parliamentary committee recently decided to urge the government to increase the duty on automobiles, parts and appurtenances. At present motor cycles are subject to a duty of about \$7.50; parts and appurtances are subject to \$3 per 100 pounds; automobiles and chassis are subject to a duty of about \$19.80 per car or chassis, the power or the motor and the weight of the car not being taken into consideration. The committee has suggested that all vehicles be divided into three classes-ordinary road cars, automobiles and cycles. The automobiles will be subdivided according to weight, for the purpose of being able to impose a heavier duty. Cars weighing less than 1,100 pounds will be subject to a duty of \$36; if they weigh between 1,100 and 2,200 pounds, the duty will be \$72 and \$108 if they weigh more. Motor cycles will also be dutiable according to weight.

LOW PRICE CARS SELL BEST

At the Crystal Palace Automobile Exhibition, seven motor cars exhibited cost less than \$480; thirty-eight cost between \$480 and \$720; forty-three cost between \$720 and \$960; sixty-eight cost between \$960 and \$1,680; eighty-five cost between \$1,680 and \$2,400; ninety-nine cost between \$2,400 and \$3,360; sixty-seven cost between \$3,360 and \$4,800, and fifteen cost more than \$4,800. The bulk of the business done at the show was for cars ranging in price from \$1,680 and \$3,360; the sale of very high priced machines was remarkably small compared with the sales of such machines at Paris and even at previous British shows.



The first day of real spring sunshine last Saturday was marked by much activity, many demonstrations and encouraging sales at the garages.

烂 烂

The American Darracq Automobile Co. received four Darracqs of new type last week—two "tulip" tonneaus with swinging front seats and folding step entrance and two double phaetons with limousine tops and doors on each side.

姓 姓

The New York Garage Co., where the Georges Richard-Brasier cars have been heretofore sold, is to be dissolved. E. B. Gallaher announces himself as their national sales agent and that he will continue to sell them at the former garage, 140 West Thirty-eighth street.

烂 烂

M. A. Cornell & Co. have taken the New York agency for the Cameron, a single-cylinder, air-cooled car, made by the United Motor Corporation, of Pawtucket, R. I., and established headquarters at Broadway and Sixty-third street. Mr. Cornell is also interested in the Tennant Tire Co.

姓 姓

"The demand for cabs far exceeds the supply," says H. C. Cryder. "At present a rental of \$250 per month is charged. We can put out cabs to rent for \$150 and make money at it. This double friction drive transmission is simplicity itself and comes near to being fool proof. One lever in front operates the machines."

烂 烂

Charles S. Worthington is building a neat garage near Seventh avenue, running through from Forty-ninth to Fiftieth street. It will have storage accommodations for 300 cars, each of which will have a steel fitted compartment to itself. There will be many conveniences in the way of reception and locker rooms. It is intended for use by private owners who do not care to maintain independent garages.

况 况

Slaton. Henderson & Gillies have taken the New York agency for the Buckmobile Co. and will conduct their business under the title of the Buckmobile Co. They have just had completed for them a fine two-story brick garage at 1900 Broadway. Mr. Gillies says the parent company will bring out this season a 16 horse-power car with vertical motor, planetary transmission and wheel steer. The local firm is going into motor-boat building also. The Rockaway Boat Co. will build the hulls, which will be fitted with Buckmobile engines. They will bring out a 25-foot 15 horsepower pleasure

boat with a guaranteed speed of 13 to 14 miles an hour to sell for \$900. They will also build a 31-foot 30-horsepower racing boat.

说 读

"We sold forty-two Peerless cars at the Boston show," said W. H. Kirkpatrick, who was in town on Monday en route home from Cleveland.

烂 烂

R. M. Owen, manager of the Amerian Automobile Storage Co. and the Oldsmobile Co., took a flying trip this week to Syracuse and Detroit to secure larger and more prompt shipments of Franklins and Oldsmobiles to meet the big demand.

姓 姓

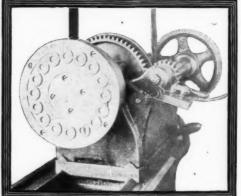
E. B. Winans, of the American Darracq Automobile Co., has invented and copyrighted a clever table, whereby one may readily determine the speed in miles per hour from the time per mile by forming right angle colmuns to their intersection. The table is being distributed free by the company.

光 光

To really learn what is good, bad and indifferent in the automobile game an American must seek the advice of some young European of about 20, who comes to this country with fearful and wonderful tales of his experience in making, selling and driving Mercedes, Panhard, Darracq, Renault, Benz and a dozen other cars

姓 姓

The Consolidated Motor Co. now has one of its gasoline trucks in actual use by the American Express Co. It is proving very successful and running far ahead of the company's schedule for horse-drawn vehicles. The trucks are being manufactured at the company's factory at Gloversville, N. Y. All are being built with the double friction drive transmission system, whose patents the company bought from the Maurer Co., of Wurnburg, Germany. By next autumn the company will be putting out



The Walker Magnetic Chuck

a 14-16 horsepower, two-cylinder tonneau, to sell for \$2,000. It is also proposed to manufacture 6-horsepower cabs, hung on C springs and luxuriously upholstered, for public and private use. For the former purpose a cab line will be established.

姓 姓

Smith & Mabley will begin to deliver Simplex automobiles and boats in May. The former will be of 22-horsepower model and the latter will run from 30 to 75-horsepower.

光 光

Mr. Cryder says that a 75-horsepower racing car will be built for "Wally" Owen to drive in the track circuit this season. The company will also put out a 25-horsepower, 30-foot boat. The engine will weigh 370 pounds and the mahogany hull to be built by Inglis, of the St. Lawrence, but 300 pounds.

烂 烂

While at the Boston show E. T. Birdsall, of the Standard Automobile Co., sold a double phaeton Decauville to Winston Churchill, the author. The car is of a new type. It is of 18-24 horsepower, 9-foot wheel base and has a victoria hood, wide side entrances and a glass front wind shield. This is the second Decauville Mr. Churchill has bought.

堤 块

The arrival of the first of the 1904 curved front Olds runabouts at the Oldsmobile Co.'s garage brought with it a genuine surprise to the trade. It proved radically different from the runabout exhibited at the Madison Square garden show, which Manager Howell now says was really but a late 1903 model fixed up with a change or two for the occasion. The real 1904 is a radically new machine. Its power has been raised from 4 to 6, the cylinders now being 5 by 6 inches, instead of 41/2 by 6, as formerly. The cylinder and head are now cast in one piece, doing away with gaskets. The cylinders are cast separately, with the cylinder fitted to the crank case by four bolts. The body and seat are much wider and all the working parts are heavier. The car now has hub brakes.

烂 烂

There was a considerable exodus of the local trade to the Boston show last week. Among those to visit the Hub's exposition and make exhibits directly and through local agents were: C. H. Tangeman, of Hollander & Tangeman, importers of the Fiat; C. R. Mabley and C. H. Hamilton, of Smith & Mabley, manufacturers of the Simplex cars and boats and importers of the Panhard and Renault; Mr. Kimball and Mr. Moody, of the Central Automobile Co., importer of the Napier, Mors and V.

& D.; F. A. LaRoche and A. L. Picard, of the American Darracq Automobile Co.,; E. T. Birdsall, of the Standard Automobile Co., whose Boston agent showed the Decauville, and E. J. Willis, sundry jobber and agent for the Orient buckboards in this city. All reported satisfactory business done.

MAGNETIC CHUCKS

The manufacture of magnetic chucks is made a specialty by O. S. Walker & Co., of Worcester, Mass., which is now introducing these chucks to the automobile trade as especially desirable in grinding piston rings or in holding other rings, disks and washers which cannot be held conveniently in other kinds of chucks for finishing their flat faces. The chucks will hold any piece with parallel flat sides without the use of bolts, straps or gripping jaws, and are made to fit Brown & Sharpe universal grinders or other makes of machines of that nature. In the illustrations herewith the chucks are shown attached to a lathe for convenience in photographing.

One illustration shows several pieces held on the same chuck to save time in grinding, the periphery of the grinder being fed gradually across the face of the work. The detail drawing shows the arrangement of the magnetic gaps and of the alternating positive and negative poles so that a ring placed upon the holding face of the chuck will be held at six different points, inasmuch as it spans six different magnetic gaps. There are two brushes placed side by side and fastened on the head stock of the grinder, being primarily mounted on an insulated collar. The brushes contact with insulated contact rings which have connection with the electric coil in the interior of the chuck. Over the small centering ring brass rings of diameters to suit the diameter of the pieces to be ground may be placed. The chucks are regularly made in various sizes from 6 to 27 inches in diameter. Special chucks of any desired diameter are also made to order.

FABRIC NOVELTIES

Automobile fabric supplies are made the subject of a folder issued by the Gilbert Mfg. Co., of New Haven, Conn. One of the appurtenances described is a tire case made of black enameled duck, which is to be used to protect against deterioration by exposure extra tires carried on the automobile. It is accompanied by a neat water-proof bag for inner tubes.



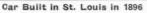
MOTOR AGI

Another article is fabric enameled leggings which are said to equal leather leggings in appearance and to be much lighter and more comfortable. The Gilbert grease bag is designed to be filled with Albany grease and strapped over steering connections, knuckle joints or other exposed connections. The company also makes covers to protect cars at rest.

A ST. LOUIS RELIC

John C. Higdon, a mechanical engineer at St. Louis, Mo., was one of the early conspirators against the horse and his initial effort in automobile building is shown in the accompanying illustration. The car was built in 1896. It was designed to travel from city to city in the states of Missouri, Kansas and Nebraska, as an advertising wagon, and it was run continuously during the summer and fall of 1896, and at that early date proved a veritable curiosity among the natives of the rural districts. It is said to be still running in St. Louis

Four elliptic springs support the body, but the engine and its frame are entirely independent of the body, being supported by small coiled springs directly from the axles. Common wood wheels, such as used on common horse-drawn wagons during the past 40 years, with ordinary steel tires, were fitted.



The engine was a single-cylinder, 5 by 7-inch stationary motor, commonly used to drive machinery and was removed from its foundation and fitted to the automobile. The engine alone weighed 2,500 pounds. A friction clutch was used to connect and disconnect the engine. The front axle has the usual knuckles whereby the front wheels are swiveled. The speed is controlled by throttling the mixture, and speed varies from 3 to 15 miles per hour. Mr. Higdon is the authority on the maximum speed of this car.

BAD AS CHICAGO

The special committee named by the Italian minister of public works has presented a scheme concerning speed regulations for Italy, recommending that the maximum speed in cities and towns be 7½ miles, no speed limit in the country, all cars to carry a white light in the rear, cars to be numbered, permits for driving to be delivered after examination.

HONORED FOR INFLUENCE

The Automobile Club of France has awarded club medals to Senators Coutant and Gerard and Deputy Hubert, all of Ardennes county, for their efforts in behalf of the French eliminating race. It was owing to their influence upon the other members of parliament that the latter voted permission to hold the race.

BETTER THAN RAILROADS

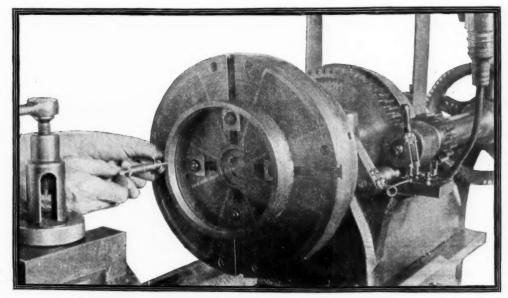
Experiments were made in Brussels by transporting in automobiles several detachments of troops belonging to an artillery regiment, with the full equipment they would carry in case of war. The results are reported to have been more satisfactory than using railroads for the same work.

IDEA IS GOOD

A member of the Danish legislature has suggested that all the railroad trunk lines be equipped with automobile feeder service. He says they will be less expensive than heavy trains and could reach many points which the railway does not touch.

AUSTRIANS CARRY NUMBERS

At a recent meeting between the Austrian minister of the interior and a delegation of members of the Austrian Automobile Club it was decided that Austrian automobiles must carry a number in front and one in the rear.



The Walker Magnetic Chuck

MOTOR AGE



The king of England now owns seven motor cars.

#

The Nederlandsche Automobiel Club has 204 members.

姓 姓

The Moline Automobile Co., of Moline, Ill., expects to manufacture about 100 automobiles this season.

烂 烂

The Illinois Motor Car Co., of which John Zimmerman is manager, has the agency for the Royal Tourist in Chicago.

烂 烂

S. G. Norton & Co., of Milwaukee, Wis., will build an automobile repository on Broadway near Mason street. The building will cost \$10,000.

况 况

The office of J. M. Quinby & Co. has been changed from 513 Seventh avenue, New York, to 1534 Broadway, corner of Forty-fifth street. The change was necessary because of increasing business and the need for larger quarters.

烂 烂

Smith & Mabley, of New York, are sending out a little story about the foreign-looking aspect of the S. & M. automobiles, telling how it puzzles even expert mechanics. The story is printed on brown paper like that used by country grocers a few years ago when they tied up sugar for the farmer's wife.

32 12

An Indian motor cycle club is being formed in Springfield, Mass., and there is a prospective membership of about thirty persons. The members plan to start on their motor cycles Saturday afternoons during the spring and summer and take a ride of a century or two, returning Sunday evening. Charles Spencer is at the head of the movement to form the club.

姓 姓

"Golden Gate to Hell Gate" is the title of an interesting little pamphlet, written by L. L. Whitman, detailing the adventures he encountered when he crossed the continent in an Oldsmobile, accompanied by E. I. Hammond. The story is told in a humorous vein, and the Oldsmobile is mentioned only incidentally—which makes it the best sort of an advertisement for the ear. The book is copyrighted, published

and given away by Brownell & Humphrey, of Detroit, Mich.

说 说

During 1903 the Dutch authorities issued nearly 1,200 driving permits. Over half of them were given to Belgian tourists.

烂 烂

A weak solution of boracic acid is recommended as a remedy for those who suffer with their eyes after driving in a keen wind.

烂 烂

Governor Myron T. Herrick, of Ohio, recently purchased a 24-horsepower Peerless car through the Chisholm-Phillips Automobilium Co., of Cleveland, O.

災 災

Henry Wilke, of Richmond, Ind., will have an automobile repair shop this season in the building formerly occupied by the Schneider carriage shop, on South Sixth street.

姓 姓

C. A. Coey & Co., of 5311 Cottage Grove avenue, Chicago, have added a stock of automobile supplies and will conduct a regular retail business in this line. The Coey company handles the Thomas car.

姓姓

Fifteen members of the Nederlandsche Automobiel Club covered 7,359 miles under government orders during the railway strikε, which fifty-nine members held their seventy-nine motor cars at the disposal of the government during the entire strike.

2 2

The H. J. Koehler Sporting Goods Co., of Newark, N. J., has established a garage in Montclair, which will prove of great convenience to owners of cars in that town, as heretofore they have been compelled to store their machines either in Newark or Orange.

烂 烂

An automobile club has been organized at Newton, Mass., with the following officers: President, William M. Ferris; vice-president, Charles J. Brown; secretary, Ralph C. Emery; treasurer, Lewis R. Speare; directors, Dr. E. R. Utley, E. D. Van Tassel, J. A. Potter, C. G. Haskell, A. M. Beers, Dana Estes, Jr., and N. F. Stanley.

The German Motor Cycle Association has arranged a competition for lanterns and lamps to be used exclusively on motor cycles.

烂 烂

The Cadillac and the Autocar will be handled this season in Mankato, Minn., by C. H. Saulpaugh and George McLean, who have formed a partnership.

烂 烂

The Powell Automobile Co., of Omaha, Neb., has filed articles of incorporation. The capital stock is \$15,000, and the incorporators are C. G. Powell, Ezra Millard and T. F. Swift.

陈陈

The New York Motor Cycle Club will hold its annual hill-climbing contest Decoration day. The contest was held at Riverdale hill last year, but this year a steeper grade will be sought.

烂 烂

J. E. Beard, of Napa, Cal., has the agency for the Rambler for Napa and Solano counties. During the week the National Automobile Co., owing to a disagreement of two of its principal stockholders, asked for and obtained an assignee in the person of A. C. Kains, of the Canadian Bank of Commerce. He has taken over the business and will carry it along on the same lines as before.

W W

The Automobile Club of Bridgeport, Conn., will hold its annual meeting on Monday, April 4, at which time it will elect the following officers: President, Frank W. Bolande; vice-president, Frank I. Hitchcock; secretary, Dr. Dow R. Beebe; treasurer, Frank T. Staples; board of governors, M. V. Doud for 1 year; Thomas H. McDonald, Gregory S. Bryan and A. L. Riker for 2 years. Mr. Bolande, who is managing editor of the Bridgeport Evening Post, was one of the incorporators of the club and was for 3 years its secretary. The club now has over seventy members and it is in a prosperous condition.

烂 烂

At the recent automobile show in Brussels, Belgium, 17 per cent of the motor cars had single cylinder motors; 27 per cent had double cylinders and 54 per cent had four cylinders. The chassis offered the following percentage: Forty-one per cent pressed steel, 40 per cent armored wood, 17 per cent tubular, and 3 per cent channel iron. The price of the chassis, according to the horsepower of the motor, was as follows: Chassis with 6 to 9 horsepower, \$760 to \$1,200; with 9 horsepower motor, \$620 to \$1,600; with 10 to 12 horsepower, \$1,200 to \$2,540; with 11 to 16 horsepower, \$1,000 to \$3,400; with 18 to 24 horsepower, \$1,600 to \$3,800; with 30 to 50 horsepower, \$2,400 to \$5,000. 姓 姓

According to the new automobile law of Denmark, motor cars must not greatly differ either in shape or size from horse-drawn vehicles. Omnibuses and large commercial cars must have rims 4 inches wide if they are not equipped with pneumatic tires. The height of the vehicle must not be over 101/2 feet and the width 6 feet 3 inches. The limit of weight is placed at 6 tons for country roads and 4 tons for city highways. All motor cars must have powerful brakes, which must enable the car to stop within 8 yards. In the larger towns the speed limit is 10 miles per hour; 20 miles in the country. The police department tests the car and also has the driver undergo an examination, oral and practical, before a license is granted.

Dayton, O., has a new automobile firm-Stark & Weckesser.

姓 姓

The chief of the New York fire department has sent in a requisition for two new automobiles to be used in the department.

災 災

At the last meeting of the city council of Allegheny, Pa., an ordinance forbidding the running of automobiles in Riverview park was passed.

烂 烂

The Lorain Automobile Co., of Lorain, O., has been organized by Frank S. Rathwell and Henry Frederick. The company will handle the Winton, Oldsmobile and Franklin.

災災

The Toledo Opthalmuscope Co., of Toledo, O., will manufacture a goggle invented by Dr. Zarbaugh, of that city, which it is claimed will protect the eyes and prevent squinting.

流 流

A line of electrically driven breast drills and grinders, well adapted to much of the fine machine work on automobile parts, is shown in a small catalogue issued by James Clark, Jr. & Co., of Louisville, Ky.

班 班

The citizens of Evanston, Ill., are considering the advisability of organizing an automobile club. It will be composed of residents of that suburb of Chicago and will keep closely in touch with the Chicago Automobile Club, most of the Evanstonians being members of the latter club.

饶 饶

The catalogue of the Auto Supply Co., Broadway and Fiftieth street, New York, lists a full quota of standard line parts and appurtenances and also numerous novelties in the way of convenient sundries for the automobilist. It is a much more extensive book than any of the previous catalogues of the company.

流流

The educational department of the Y. M. C. A. of Providence, R. I., which, as formerly announced in Motor Age, has undertaken, with the assistance of the Boston Y. M. C. A., to conduct an automobile school in connection with its evening institute, has issued its prospectus. The course opened March 21 and is substantially the same as that which has been carried out in Boston, a few changes such as dictated by the former experience being made.

流 流

The Locomobile Co. of America, of Bridgeport, Conn., believing that more than ever before the prospective purchaser of an automobile takes an intelligent interest in a car's construction, announces that it is always glad to
receive visitors at its factory and to show them
all the features of its gasoline cars in the
various stages of development. The company
only asks that visitors advise it in advance of
their coming that proper arrangements may
be made to receive them.

125 125

C. G. Burgoyne, of Daytona, Fla., president of the Florida East Coast Automobile Association, in one of the local papers replies to statements made in an eastern paper relative to the work done by this association in connection with the recent speed tournament on the Ormond-Daytona beach. The association having been accused of having done little toward the meet's success its president calls attention to the fact that it did all it possibly could, and a whole lot at that, in consideration

of the fact that men who work for their living contributed both money and time in preparation for and in the conduct of the affair.

烂 烂

Robert S. Crawford, of Philadelphia, Pa., with the assistance of Hagerstown, Md., capitalists, will build an automobile factory at Hagerstown, Md.

災 災

The power plant of the Northern Automobile Co., of Detroit, Mich., recently became disabled and the shop machinery was temporarily run by Northern carriage motors.

烂 烂

A fund of \$4,000 has been subscribed by the citizens of Cherryville, Pa., toward establishing the Frantz Mfg. Co., which will manufacture kerosene engines, burners and boilers.

烂 烂

The Iowa legislature has passed the Christianson bill, which requires automobiles to be registered, and makes the speed limit 10 miles an hour in the cities, 15 miles an hour in the outlying districts and 20 miles an hour in the open country.

流 流

The Oldsmobile Co. of New England, of Boston, Mass., the New England branch of the Olds Motor Works, of Detroit, Mich., under the management of Benjamin Smith, has issued a little booklet containing Whitman's story of the trans-continental trip in an Oldsmobile and T. P. Driver's story of his ride up Mount Washington. It is artistically gotten up. In fact, typographically, it gives the Whitman story booklet issued by the home office a close shave in degree of excellence.

烂 烂

The Winton Motor Carriage Co. announced last fall that prompt deliveries of 1904 Winton cars would be guaranteed. In order to carry out this promise, the company completed its plans so early that by September, 1903, its big plant was working full force in every department. By continuing work steadily all winter the company has already completed its full quota of several of the car's parts, and in consequence of this fact the force in the wood working department and the machine shops has been reduced. Meanwhile, it is said, cars are being turned out at the rate of one per hour and will continue to be so produced until the season's supply is manufactured. In anticipating the demand for cars, the company has endeavored to avoid the congestion that generally results during the rush season to the discomfort of maker, dealer and purchaser alike.

徒 徒

It is reported that E. R. Hollander, of Hollander & Tangeman, of New York, importers of the Fiat car, has offered to give \$5,000 to the winner of the Gordon Bennett international cup race if he drives a Fiat car.

100 100

Ralph Rogers, of Ottumwa, Iowa, will open an automobile salesroom in that city in April. He will carry the Rambler and Mitchell cars. Mr. Rogers has for nearly 2 years past been in the employ of Thomas B. Jeffery & Co., of Kenosha, Wis., as automobile inspector.

烂 烂

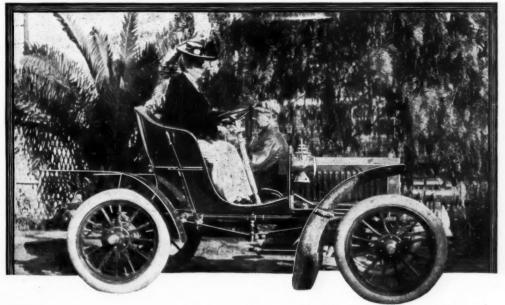
During 1902 there were imported into Great Britain 3,747 automobiles and motor cycles, valued at \$4,762,699. In 1903, the number of imported cars and motor cycles was 6,133, with a total value of \$8,227,099. On the other hand 415 British cars and motor cycles were sent to foreign countries in 1902, and their value represented \$745,632. During 1903 the exports reached \$1,390,177 for 957 cars and motor cycles.

烂 烂

The Transportation Club of New York chose the automobilists to honor at this year's annual banquet, which was scheduled to take place at the New Manhattan hotel, Tuesday. Many pioneers in motor vehicle invention and manufacture were invited. Among the invited speakers were Winthrop E. Scarritt, president of the A. C. A.; John B. Dill, a long-distance touring enthusiast; John A. Hill, chairman of the A. C. A. central committee, and Highway Commissioner McDonald, of Connecticut.

能 能

A call has been issued by some of the automobile owners of Binghamton, N. Y., for the organization of a club, and about sixty-five motorists have signified their intention of joining. A general meeting for the purpose of perfecting plans for the organization of the club will be held in a few days, and it is expected that the ideas of the promoters of the club will be carried out at that time. The club will start in on a small scale, but later arrangements will be made for club rooms, and meetings will be held regularly.



Mrs. George Bowman, of Los Angeles, Cal., Driving Her Arrow

AUTOMOBILE

RACES AT KIEL REGATTA

The German emperor having fallen a victim to motor boating, the great regatta at Kiel, which opens June 22, will be quite as much a motor boat affair as a sailing event. There is to be a series of races for motor boats, including all modern types of steam, benzine, petroleum and alcohol motor boats and vachts. The boats will be divided for the competition, according to tonnage and power, into three classes or categories, with prizes in each class and a valuable trophy to be given by the emperor to the winner of the principal event. The conditions of admission and rules and stipulations governing the several contests are now in preparation by the German Automobile Club, and will be given in a subsequent report as soon as they are announced.

The enterprise is inspired and directed by the emperor, who has ordered for his own entry in the coming contests a motor boat which is now under construction at Bristol, R. I. In view of the recognized pre-eminence of American builders of motor boats of all classes, it is especially desired in this country that they shall take an active part in the competitions at Kiel, and make a display there which shall worthily represent their high standing in this interesting and important class of saltwater craft.

In June, 1902, there was held at Wannsee-onthe-Havel, near Berlin, a special international exhibition of motor boats with special reference to the types and sizes best adapted to use upon inland lakes and rivers. A special appeal was made to American builders, the managing committee even going so far to guarantee the sale of any representative American-made boat or motor which might be exhibited there; but that was during the period of full-tide prosperity in the United States. All the leading American builders were stocked with orders covering their whole product for the year, and while personally interested in the Wannsee competition, and appreciating the inducements offered, they were too busy with actual business to send over and exhibit in Germany boats which had been already sold in the United States. Naturally enough no builder cared to retain for exhibition abroad a boat or motor which had been ordered by a customer who was impatiently awaiting delivery, and so it happened that the United States was wholly unrepresented at Wannsee, and the competition, which was mainly between boats of German, French and Belgian construction, failed to reach the standard of a representative international display.

This year the competition will be under different auspices and on a much more imposing scale. Its purpose will be to bring together the work of the foremost motor boat builders



On the Upper Thames

.....



MOTOR AG

The French Marthe

in all countries under circumstances which will test and demonstrate their relative speed, economy and other merits under conditions which will give to a victorious record a world-wide significance.

MOTOR BOATS IN THE SOUTH

Nashville, Tenn., March 19-At the present time not a single automobile boat; as far as can be ascertained, is owned in middle Tennessee. John W. Chester will soon purchase one, however, and it is expected that they will become popular here. The Cumberland river, on which Nashville is situated, does not furnish an ideal stretch of water at the present time. During the summer the latter is low and navigation, in fast moving boats, becomes danger-The United States engineers, however, are rushing work on locks I and A-one above Nashville and one below-and they will be finished during the fall. When these go into operation there will be a long stretch of deep water extending in both directions from the city, which will furnish an excellent place for running fast boats. At the present time there are a number of steam and small gasoline launches on the river and they will certainly be succeeded by larger motor boats after the new dams begin to back up the water and furnish a suitable place for fast running.

MOTOR BOAT NOTES

A Detroit builder has hopes of driving a 57-foot boat 45 miles an hour.

Sixteen horsepower in a 16-foot boat, a Chicago man's idea, is almost the limit.

A race is on between some of the "400" to see who shall have the first fast motor boat in the water.

The Truscott Boat Mfg. Co., of St. Joseph, Mich., will have a full-rigged gasoline yacht, 77 feet long, with bridge, in the center of its immense exhibit at the St. Louis World's fair.

A Boston paper explains the difference between "the marine engine and that of the auto-marine boats" as follows: "The distinction is the procuring of high power with small weight of machinery, and is practically the difference between the make and break, or primary spark coil, and the jump spark or induction coil."

MOTORING IN EGYPT

Of the forty automobiles which have so far been imported into Egypt about a third are the property of the Khedive. He received the first car sent to Egypt, 3 years ago, which was a 3½-horsepower de Dion-Bouton. The last car purchased by the ruler of the Egyptians was a large Mercedes. Most of the automobiles are to be found in Cairo, where the roads are a trifle better than elsewhere. The most popular road is that to the Pyramids, which is a straight course about 8 miles long.

BOATING

GASOLINE LIFE BOATS

Washington, D. C., March 19—The fact has just been brought to light that for the past 6 weeks the revenue cutter service of the treasury department has been conducting experiments for the purpose of equipping the life saving boats of the government with engines or the automobile type. These experiments, which are under the immediate direction of Captain Collins, engineer-in-chief of the revenue cutter service, have progressed so far that the very near future will see a type of engine evolved that will be perfectly adapted to the purpose.

The problem to be solved is by no means an easy one for the type of engine suitable for use in the life boat now employed in the life saving service must, with the screw and other machinery used, be kept at a low weight; otherwise the capacity of the boat will be interfered with. At the same time an engine of unusual strength is required. The experiments thus far indicate that a motor of about 20 horsepower will be required.

It is the aim of the revenue cutter engineers who are working on the problem to devise an engine that will be a compromise between the marine engine and the automobile type of engine, to utilize features of both and get an engine of minimum weight combined with the highest possible efficiency. The necessity of starting a life boat quickly makes the use of gasoline almost imperative. It is the belief of the engineers that an engine can be devised which, with the shafting, screw, and other necessary apparatus, will weigh about 1,200 pounds. It will be located in the stern air chamber of the life boat, as under this arrangement no room otherwise needed will be occupied. One indispensable feature of the engine is that it must come to a halt when the boat is overturned. Otherwise the revolving of the screw in a heavy sea might endanger the lives of the life savers.

The completion of the experiments now under way will be watched with interest by all who are interested in the improvement of engines suitable for boats.

MAXIM LECTURES

The subject of Hiram Percy Maxim's lecture before the Automobile Club of America Tuesday night was "Commercial Vehicles." He made special reference to the cost of maintenance under actual service conditions of electric wagons and trucks equipped with the batteries, tires and general equipment which are standard at the present time. He also discussed the cost of maintenance on the basis of the different improvements in batteries which are now under consideration.



MOTOR AGE

Entering a Harbor

AMERICAN MOTOR LEAGUE

OFFICERS:

ISAAC B. POTTER, President, Potter Building, New York. CHARLES E. DURYEA, First Vice-Pres., Reading, Pa.

W. GRANT MURRAY, Second Vice-Pres., Adrian, Mich.

S. W. MERRIHEW, Third Vice-Pres., 154 Nassau St., New York. ROBERT L. STILLSON. Secretary, 150 Nassau St., New York.

FREDERICK B. HILL, Treasurer, 32 Binford St., Boston.

National Headquarters: 150 Nassau Street, New York



CHAIRMEN OF NATIONAL COMMITTEES:

CHAIRMEN OF MATIONAL COMMITTEES:

LEGISLATION—
George R. Bidwell, New York, N. Y.

ROAD IMI ROVEMENT—
R. E. Olds, Lansing, Mich,

LOCAL ORGANIZATION—
Charles F. Potter, Denver, Colo.

TOURING—
W. H. Baker, Buffalo, N. Y.

TECHNICS—
Charles E. Duryea, Reading, Pa. Charles E. Duryea, Reading, Pa. Frank A. Egan, New York, N. Y.
SIGN BOARDS—
John B. Price, Hazleton, Pa.
RACING— A. G. Barchelder, New York, N. Y. Joseph Estoclet, Philadelphia, Pa. Francis N. Bain, Newburg, N. Y.

OFFICIAL BULLETIN

STATE ROAD BOOKS

Last week this page contained an extended outline of the three new road books for eastern, central and western New York. Letters are being received at headquarters asking for routes and maps covering other parts of the country. These will be prepared as rapidly as information is received, and will be printed and distributed as soon as the growth of the league makes it possible, and doubtless within the present year. It costs several thousands of dollars to collect information, prepare maps and issue a really creditable book, and this money must, of course, come from the membership fees paid into the league treasury. The league has no other substantial source of income. Another thing to be remembered is this-the league receives twenty inquiries from persons who want information, to one who offers to contribute any. It is not easy for a man in New York to write down the best routes between two towns in West Virginia unless he has first received the information from some one who has been over the route. In a word, the situation is this-give to the league plenty of information and a large membership and road books will follow in abundance.

ROAD BOOK FOR NEW ENGLAND

The growing membership of the league in New England states warrants the beginning of road book work in that district, and information sent in from New England automobilists will be compiled and used in putting together information and maps for the New England book.

In Maine the league needs accurate memoranda and descriptions of routes centering at Calais, Bangor, Augusta, Rockland, Lewiston, Bath, Portland and Biddeford, and also description of routes connecting populous points along the coast.

In New Hampshire correct routes through the White mountain district and routes centering at Concord, Dover, Rochester, Portsmouth, Manchester, Nashua and Keene are especially needed.

In Vermont the league asks for routes through the picturesque Green mountain district and routes centering at St. Albans, Burlington, St. Johnsbury, Montpelier, Rutland, Dorset, Bennington and Brattleboro.

IN MASSACHUSETTS

In this state the league is fairly well equipped with information and maps, but these should be checked and corrected by re-

vised information. Routes running in all directions from Boston will be gladly received, and routes centering at the following points should be accurately described and sent to headquarters: Newburyport, Gloucester, Lawrence, Lowell, Fitchburg, Marlboro, Quincy, Attleboro, Taunton, Fall River, New Bedford, Barnstable, Dennis, Brockton, Milford, Worcester, Springfield, Northampton, Pittsfield, North Adams and routes throughout the Housatonic valley.

CONNECTICUT AND RHODE ISLAND

In these states the league is well supplied with route information, which must, however, be revised and corrected to meet present conditions. To that end routes centering at Hartford, Winsted, New Britain, Torington, Waterbury, Danbury, Bridgeport, Stamford, New Haven, Meriden, Middletown, New London, Norwich, Woonsocket, Pawtucket, Providence and Newport will be gladly received and acknowledged.

PENNSYLVANIA ROAD BOOK

The last reliable route book for Pennsylvania was published by the League of American Wheelmen about 6 years ago. Today it serves the purpose of the automobilist in a partially satisfactory way, and much of the information contained in that book may be

THE AMERICAN MOTOR LEAGUE

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and by which touring may be facilitated and encouraged; to promote the work of improv-ing the public roads and the erection of proper guide boards, and other signs neces-sary to guide and warn the users of motor vehicles; to select and appoint official hotels repair shops and supply stations where its members may obtain reliable service at reasonable rates.

WHO MAY BECOME A MEMBER

"Any man or woman, 18 years of age or over, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article 2, Section 1.) The League is extending its membership in all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization.

NO INITIATION FEE. ANNUAL DUES \$2 IN ADVANCE, OR \$3, INCLUDING 1 YEAR'S SUBSCRIFTION TO MOTOR AGE.

utilized for the purposes of the A. M. L., though a careful revision will be necessary. The league asks the automobilists of Pennsylvania to send information and descriptions of routes centering at Philadelphia, Harrisburg, Lancaster, Norristown, Reading, Allentown, Pottsville, Wilkesbarre, Scranton, Shenandoah, Williamsport, York, Johnstown, Pittsburg and Allegheny, Oil City, Bradford, Titusville, Meadville and routes across the Blue. Tuscarora and Allegheny mountains, especially those which connect points in the valley of the Susquehanna river with Pittsburg and other cities on the Allegheny and elsewhere in the western part of the state.

IN NEW JERSEY

Many New Jersey routes will be included in the eastern New York book, but a special route book for New Jersey is in course of preparation and will be issued as soon as possible. Memoranda describing popular routes in New Jersey will be gladly received.

FOR THE MIDDLE WEST

The north central states of Ohio, Michigan, Indiana, Kentucky. Illinois, Wisconsin, Minnesota, Iowa, Missouri and Kansas supply an interesting field for touring and the demand for route information in these states is growing from week to week. This information the league proposes to supply as rapidly as possible, and to publish maps and road books for these states as soon as the earnest co-operation of its members and other automobilists can be secured.

DESCRIBING ROUTES

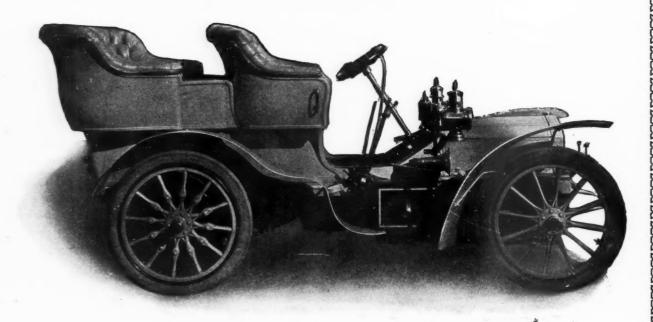
The automobilist who attempts to describe a route should remember in the first place that his information will be placed before people who are entire strangers to the locality, and for this reason the description should be given in great detail. All small towns and intermediate points should be carefully noted and the distances in miles and fractions of a mile should be set down. The character of the road should be noted-whether macadam, dirt, gravel, clay or pavement-and wherever a point is found where a fork or branch road is likely to confuse the traveler, the proper direction should be carefully noted.

ROUTE SLIPS

The league is preparing at headquarters and will send out upon request, route slips upon which may be written descriptions of routes from place to place and these slips contain printed hints as to the best and clearest way of preparing the needed information.

"THE ARISTOCRAT OF AUTO CARS"

F. A. Automobiles Auto Boats



16-20 H. P. CAR, WITH "KING OF BELGIANS" BODY.

The highest grade automobile manufactured. Made entirely in our factory at Turin, Italy, one of the best equipped on the continent. Motors 16-20 H. P., 24-30 H. P. and 60 H. P., fitted with four cylinders. All the popular styles of body are carried in stock. Special styles built to order promptly. By pressure on a simple foot pedal ignition is advanced and throttle opened simultaneously, in proportion to speed of engine. No other motor is so simple, no other combines so much speed and power with absolute reliability. Made for those who want the best.

Hollander & Tangeman

Licensed Importers Under Selden Patent

5 West 45th Street

NEW YORK CITY

Sole Agents for United States and Canada



That Decauville Car

Is guaranteed for three hundred and sixty-five days and the guarantee is unlimited relative to both workmanship and material.

The steel pan, which supports and protects the entire mechanism from mud, water and dust, makes the Decauville the most desirable car on the market for American roads.

The Decauville cars are built by the Societe Decauville, the famous locomotive builders and one of the largest engineering firms in France. One thousand miles without a single stop is an official record.

Edinburg to London, over four hundred miles, without a single stop is another official record.

The Decauville is not an experiment, and is therefore a safe investment.

Send for full particulars about "That Decauville Car."

STANDARD AUTOMOBILE Co. of N. Y., Sole American Agent 136 West 38th Street, New York

Licensed Importers Under Selden Patent

AGENTS:

Philadelphia: H. S. Lane Motor Car Co.

242 N. Broad St.

Boston: The Lewis & Matthews Co. 66-70 Stanhope Street

New Jersey: Burtt & Co.,

346 Halsey Street, Newark

Chicago: ? ? ? ? ?

We will appoint desirable agents in unoccupied territory.

TWO NEW AUTOMOBILE TIRES

The Instantaneously Detachable

DUNLOP

AND

The

HARTFORD

CLINCHER

Introducing an entirely new departure in rim construction. :. Its detachable side flanges or beads are removed by the simple loosening of a screw, leaving a flat faced rim, from which the tire can be removed "like slipping a belt off a pulley"—a loose belt at that,

made under the G & J patents. This tire combines all the excellent qualities of that construction with many improved features of its own, hitherto characteristic only of the foreign makes

THE HARTFORD RUBBER WORKS CO.

HARTFORD,

CONNECTICUT

BOSTON NEW YORK PHILADELPHIA BUFFALO CLEVELAND DETROIT CHICAGO MINNEAPOLIS DENVER SAN FRANCISCO

HORSE POWER

Some of our competitors try to make Cadillac dealers believe that we lack sufficient horse power, and that we only "claim 6½ horse power." It is true we rated our 1903 engine at but 6½ horse power. We had an object in doing this. We knew we had sufficient horse power to drive a Cadillac over any road and up any hill that any automobile would go. No Cadillac engine was sent out of our engine factory that would not test up to 8½ horse power actual brake test after one hour's run on the block.

FOR 1904 Ø Ø

We have continued to use the same engine in models A. and B. We are confident that we have increased the horse power delivered to the ground, but our brake tests are the same this year as last. The engine in the Model B is the same as in Model A. The superior construction of both these models enables us to assure all prospective customers of greater horse power than we gave last year. The Cadillac has all the power necessary to drive it anywhere at reasonable speed. We've never claimed any more than we had. A Cadillac engine has on several occasions demonstrated its ability to do more work than some 10 or 12 horse power gasoline engines can do.

Cadillac Automobile Co.

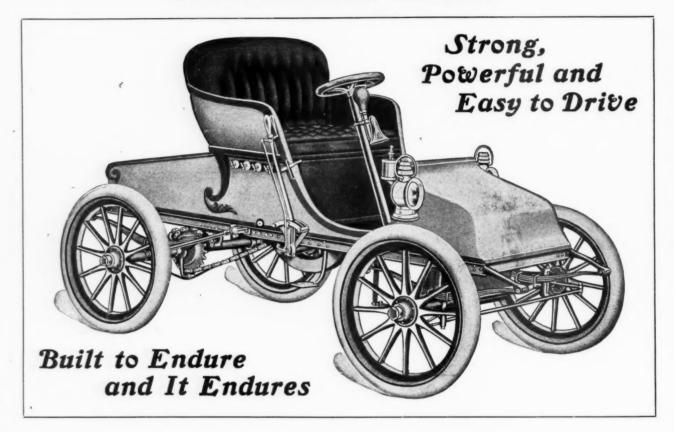
DETROIT,

Member of the Association of Licensed Automobile Manufacturers.

MICHIGAN

The Marr Auto Car

SIMPLE-DURABLE-RELIABLE



Up to date with all known improvements and conceded to be more than two years in advance of all others. Will climb any hill—on any road—in any weather. Starting, Stopping, Reverse, and all Changes of Speed accomplished by one lever at Right of Seat.

Ideal and Summer Machine \$800 Price, complete with Fenders, Lamps, Rubber Foot Mat and Tools

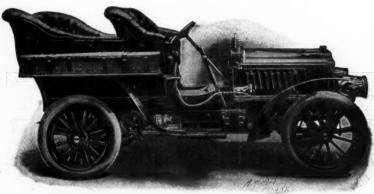
In daily use and giving perfect satisfaction to owners and drivers. PROMPT SHIPMENTS IN REASONABLE QUANTITIES AT ONCE AND DURING ENTIRE YEAR GUARANTEED.

A few only good independent agents wanted to whom special terms will be given. The profit margin will interest you. For further information and particulars address

The Marr Auto Car Co., Detroit Michigan



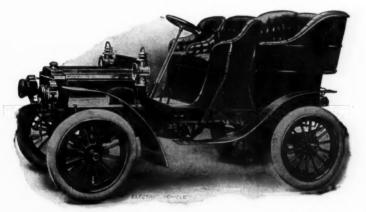
MARK XLII TOURING CAR



30-35 HORSEPOWER HONEST RATING

This car introduces important new features suggested by a year's experience and perpetuates the best points of the COLUMBIA MARK XLII of Chicago-New York Record and Endurance Run fame. MARK XLII has a 106-inch wheel base and pressed steel frame with the chassis entirely independent of the body. The four-cylinder engine, nominally rated at 30 h. p., but having developed 35 h. p. in actual tests, has mechanically operated inlet and exhaust valves and exclusive improvements in the spark-timing, lubricating and controlling devices. The material of the entire car is so distributed as to give the maximum of strength with the minimum of weight, making it the lightest car of equal power ever built for touring. Price, with standard tonneau body, \$4,000. Canopy top, \$300 extra. Special prices for Aluminum, Limousine or Surrey bodies.

MARK XLIII LIGHT TONNEAU



12-14 HORSEPOWER HONEST RATING

MARK XIIII has a two-cylinder opposed engine forward in a removable bonnet, bevel gear rear axle drive, sliding gear transmission with three speeds forward and one backward, direct drive on the high gear, and a foot operated friction clutch which is self-compensating for wear. The machine can be run at a speed of thirty miles per hour on the level and a first class hill climber on the high gear. Lubrication is automatic. The carbureter permits use of kerosene in emergencies. Entirely new features in the control system make this the easiest of all gasoline cars to operate. The body is noticeable for its exceedingly handsome lines and convenient disposition of seat room. The tonneau seats are of full carriage size. All materials and workmanship are of the very best and the car is of the highest grade in every detail, great or small. Canopy top, \$200 extra.

A Catalogue of Columbia Gasoline Cars and Electric Pleasure Vehicles will be sent on request; also separate Catalogues of Electric Town Carriages of the coach class and Commercial Vehicles,

LE CO., Hartford, Conn.

New York Branch: 134-130-138 W. 39th St.

Chicago Branch: 1413 Michigan Ave.

Boston Branch: 74-76-78 Stanhope St.

Member Association of Licensed Automobile Manufacturers.







Head and Shoulders Above All Others

There are Rims and Rims, but the truest and best rims are those that are electrically welded—the process first adopted by the Standard rim makers.

The out-of-date rims are brazed rims—they're all "back numbers" because electric welding makes welds so exact that perfect accuracy is absolute.

The brazed rim "guess-work" is entirely dispensed with—hence each "Standard" rim is perfect—can't be otherwise.

The Standard factory inspection rules are critically severe—but it pays to be severe sometimes, as there is not the slightest chance for imperfect rims to escape the notice of their inspectors.

Specify Standard Rims and secure satisfaction—not satisfaction sometimes, but satisfaction always.

Every Standard rim bears the tire maker's approval stamp. This makes your tire guarantee binding.





WE FURNISH THE AUTOMOBILE MANUFACTURERS WITH COMPLETE FRONT AND REAR

Ball Bearing Axles

THAT ARE WELL KNOWN FOR WORKMANSHIP, DURABILITY AND EFFICIENCY

THE AMERICAN BALL BEARING CO., - -

Cleveland, Ohio

NOTICE

USERS, AGENTS, IMPORTERS, DEALERS AND MANUFACTURERS OF

Gasoline Automobiles

United States Letters Patent No.549,160, granted to George B. Selden, November 5, 1895, controls broadly all gasoline automobiles which are accepted as commercially practical. Licenses under this patent have been secured from the owners by the following named:

MANUFACTURERS

Electric Vehicle Co. The Winton Motor Carriage Co. Packard Motor Car Co. **Olds Motor Works** Knox Automobile Co. The Haynes-Apperson Co. The Autocar Co. The George N. Pierce Co. Apperson Bros. Automobile Co. Locomobile Co. of America The Peerless Motor Car Co. Standard Motor Construction Co. Waltham Manufacturing Co. Pope Motor Car Co.

The J. Stevens Arms & Tool Co. H. H. Franklin Mfg. Co. Smith & Mabley, Inc. The Commercial Motor Co. Berg Automobile Co. Cadillac Automobile Co. Northern Mfg. Co. Pope-Robinson Co. The Kirk Mfg. Co. Elmore Mfg. Co. E. R. Thomas Motor Co. Buffalo Gasoline Motor Co. Pope Manufacturing Co. The F. B. Stearns Co. The Sandusky Automobile Co. Crest Manufacturing Co.

IMPORTERS

Smith & Mabley, Inc. Central Automobile Co. Alexander Fischer. Hollander & Tangeman Sidney B. Bowman Automobile Co. Standard Automobile Co. E. B. Gallaher Auto Import Co. American Darracq Automobile Co.
Controlled by F. A. La Roche Co.

These manufacturers are pioneers in this industry and have commercialized the gasoline vehicle by many years of development and at great cost. They are the owners of upwards of four hundred United States Patents, covering many of the most important improvements and details of manufacture. Both the basic Selden patent and all other patents owned as aforesaid will be en-

forced against all infringers.

No other manufacturers or importers than the above are authorized to make or sell gasoline automobiles, and any person making, selling or using such machines made or sold by any unlicensed manufacturer will be liable to prosecution for infringement.

A suit was commenced on Oct. 22d against a dealer, and against a manufacturer infringing United

States Letters Patent No. 549,160.
A suit was commenced Nov. 5th, against a purchaser and user of an automobile infringing the same patent.

A suit was commenced December 28th, 1903, against an importer of automobiles infringing the same patent.

Association of Licensed Automobile Mfrs. No. 7 EAST 42d STREET, NEW YORK



YOU SEE THEM WHEREVER YOU GO THEY GO WHEREVER YOU SEE THEM

The true worth of an Oldsmobile is best determined by actual use. Every user is an enthusiastic admirer.



The OLDSMOBILE

STANDARD RUNABOUT

This machine which sells at a price within the reach of men of average means, stands today as it has for five years past, the most perfect automobile runabout in the world.

LIGHT DELIVERY WAGON

This machine solves the problem of distance in the delivery of goods. The ease with which it is operated and its freedom from any tendency to get out of repair has made it extremely popular with all classes of merchants.

For full information regarding the Oldsmobile line see our nearest agent, or write direct

OLDS MOTOR WORKS, 1300 Jefferson Ave., Detroit, Mich., U. S. A.

MEMBER OF THE ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS,

"IMPERIAL" Gasoline Automobiles

DOUBLE OPPOSED
AIR-COOLED MOTOR

A ARE ALWAYS READY A A THE HOTTEST DAYS OF SUMMER THE COLDEST DAYS OF WINTER

BEVEL GEAR DRIVE SLIDING GEAR TRANSMISSION

WE MANUFACTURE 4 DIFFERENT MODELS

Model A. Open Rurabout

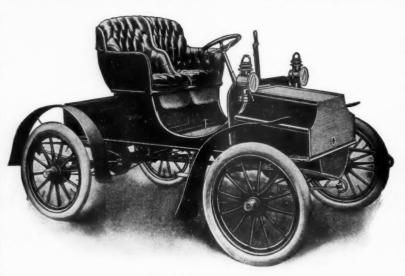
Model B. Runabout Furnished with Falling Top or Doctor's Top

Model C. Delivery Wagon

Model D. Full Glass Doctor's Car

HAS ALL THE LATEST IMPROVEMENTS

Our "IMPERIAL" Automobiles are driven by double opposed air-cooled engines (no water, no radiator coils, no pump), placed in front, away from all dirt and dust. All parts accessible by simply lifting the hood. Has bevel gear drive instead of sprocket chain. Sliding gea transmission Two brakes. Automatic spark timer. Forced feed oiler of large capacity. Tilting steering wheel. Our spring suspension we claim is the most practical and best ever shown on any automobile. Body of handsome design, roomy and comfortable, and with ample room back of seat for carrying a number of parcels. Upholstered in the finest quality of leather.



IMPERIAL MODEL "A"

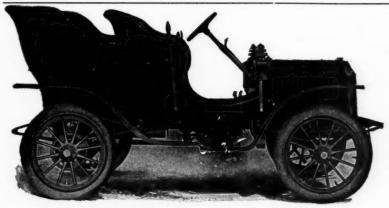
AGENTS WANTED IN UNOCCUPIED TERRITORY
BOOKLET ON APPLICATION

RODGERS & CO., COLUMBUS, OHIO, U. S. A.

SESTIMENT OF THE SESTION OF THE SEST

The National Line for 1904

CONSISTS OF 141 MODELS



"THEY GO THE ROUTE"



12 Electrics and

Runabouts Road Wagons Stanhopes Electrobiles Traps, Etc.

Edison, Western or Exide Batteries

2 Gasoline Touring Cars

Four Cylinders Pressed Steel Frame Bevel Gear Drive and many other up-to-date features

This Line

is a most desirable addition to any dealer's stock. Catalogue and circulars descriptive of our entire line now

Write us now. We want live representatives in unoccupied territory.

National Motor Vehicle Co., 1200 E. 22d Street INDIANAPOLIS, IND.

Standard of Value

IS THE PRICE OF A



Model "E" \$650 Single cylinder, lever steering

Model "G" \$750

Single cylinder, wheel steering, 81 inch wheel base

Model "H" \$850 Single cylinder, with tonneau, 81 inch wheel base

Model "J" \$1100

Double opposed cylinders, 16 horse power, 84 inch wheel base

Model "K" \$1200

Double opposed cylinders, with ton-neau, 16 horse power, 84 inch wheel base

Model "L" \$1350

Double cylinder tonneau, complete with canopy top and side cur-tains, lamps and baskets

If you pay any more, you cannot get your money's worth If you pay any less, you don't get satisfaction

THOMAS B. JEFFERY & CO., Kenosha, Wis.

Boston: 145 Columbus Avenue

Chicago: 304 Wabash Avenue

Rambler, Grescent, Monarch, Imperial Motor Bicycles, for 1904

Unique construction. Simple to operate. Safe, comfortable, speedy.



Pope Product

POPE MANUFACTURING CO.

WESTERN DEPARTMENT CHICAGO, ILL.

Pope Quality



4-cycle, high compression, jump spark motor, 13/4 H. P. with great reserve power.

Absolute one lever control.

Speed 5 to 30 miles per hour.

No mechanical skill required.

"JUST GET ON AND RIDE"

PRICE \$225

Send for Illustrated Catalogue



All the Improved features of the expensive touring cars

Simple Construction
Easy to Operate
Ample Speed, Power
and Carrying Capacity



Model B. 10 H. P. Price \$1200 Without Tonneau \$1050

Two new masterpieces added to the product of

POPE MANUFACTURING CO.

HARTFORD, CONN.

Modern Gasoline Cars at Moderate Prices.

A staunch and reliable car for all around service





Complete and Comprehensive Catalogues for 1904 sent.on request

6 H. P. Price \$650

BRANCHES

ow York—12 Warren St.

Boston—221 Columbus Ave.

Washington, D. C.,—819 Fourteenth St., N. W.

Providenc:, R. I.—15 Snow St.

Philadelphia, Pa.,—909 Arch St.

San Francisco, Cal.—451 Mission St.

Chicago, III., 497 Wells St.

GLASSIFICATION ... WHY?

THE LIGHTEST THE STRONGEST MOST DURABLE MOST EFFICIENT BEST FINISHED



ABSOLUTELY SAFE PERFECTLY CLEAN BEST TO RIDE MOST ECONOMICAL TO KEEP

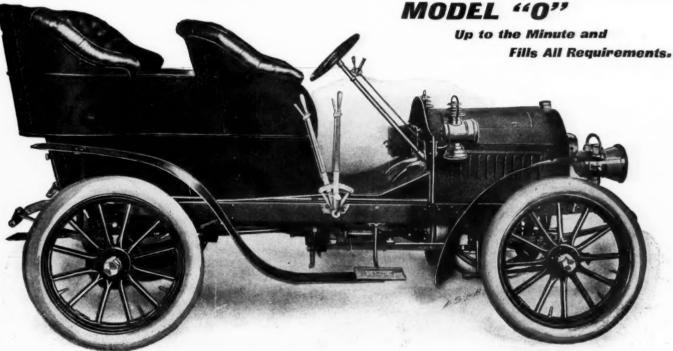
ELECTRIC THE BA

Attractive in Rich Finish and Design. Simply Manipulated. Always Satisfactory. A Carriage Any Lady Can Drive.

SEND FOR OUR B K CATALOG. THE BAKER MOTOR VEHICLE CO.. Cleveland, Ohio

THE ROYAL TOURIST

Up to the Minute and



18 H. P. \$2,300. Aluminum Bodies. 10 Day Deliveries. THE ROYAL MOTOR GAR GO., GLEVELAND, OHIO.

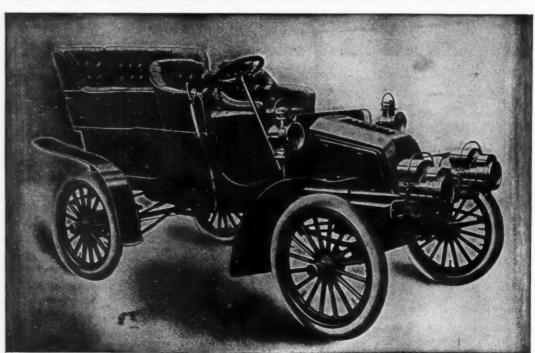
DUERR-WARD CO., Distributors for New York and vicinity.

ILLINOIS MOTOR CAR CO., Distributors for Chicago and vicinity.



You Know This Gar! It is the ... Tried and True FREDONIA

which never failed in the severest tests of last season



WE

await your decision relative to our new 2-cylinder car, which constituted an interesting part of our Chicago Show Exhibit. WE think it is the "real thing" and are prepared to show

YOU

Fredonia Mfg. Co.

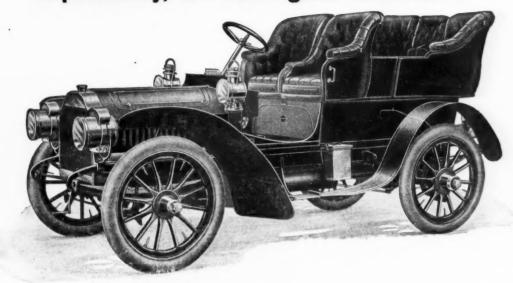
Youngstown, Ohio



CHICAGO AGENT:

Western Automobile Co., 1303 Michigan Avenue.

Elegance, Comfort, Ease, Safety, Speed, Simplicity and absolute Dependability, find their highest attainment in



Peerless Direct Motor Cars
THE PEERLESS MOTOR CAR CO., CLEVELAND, O.

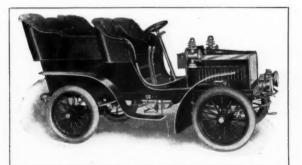
Member Association Licensed Automobile Manufacturers.

TWENTY HORSEPOWER THE

PRICE \$2,000.00

DUMONT

THE MOST POWERFUL FOUR-CYLINDER AIR-COOLED CAR EVER BUILT. :: :: :: ::



AND WE GUARANTEE IT TO KEEP COOL UNDER THE MOST SEVERE TESTS. :: :: :: ::



WRITE US AND WE WILL TELL YOU MORE ABOUT IT.

BUILT BY THE

Columbus Motor Vehicle Co.

WEIGHT

COLUMBUS, OHIO.

AGENTS WANTED.

FOUR



(Model "C")

includes all of the many excellencies of the original Mason Engine, with additional features, which give it a still greater lead ahead of all

other steam auto engines.

Every part of the Mason Engine has been critically gone over, and wherever possible, improved, strengthened and perfected in every smallest detail.

The "NEW MASON"

We have made, operated and repaired more steam auto engines than any other concern, and have concentrated in the "Model C" all of the experience gained by this wide observation of all other engines.

We do not claim that The Mason "Model C" is a perfect engine, but do positively affirm, and are ready to back up our affirmation, that it is, from every standpoint,

THE BEST AUTO ENGINE IN THE WORLD.

Our "Model C" catalogue will tell you all about this engine, and prove interesting to every autoist. It will be a pleasure to mail you a copy. Send postal card for it to-day.

A full line of parts for all Mason Engines will be found at 147 Queen Victoria St., London, England.

THE MASON REGULATOR COMPANY, - - 158 Summer Street, BOSTON, MASS.

AMERIGAN SIZES

OF

CONTINENTAL

TIRES

NOW IN STOCK.



Why spend your money for experiments? Continental Tires have been successfully made for over 10 years.

Specify Gontinental Tires

and your tire trouble will cease.

Continental Caouteboue Company

Emil Grossman, Mgr.

American Office, 298 Broadway, New York factory, Hanover, Germany.

Are You With Us?

COL. SPRAGUE'S \$100.00 CANOPY



With Concealed Curtains—Weighs About 65 lbs.
Complete.

We also make a \$200 Canopy. We make park canopies for ladies' use on runabouts and light touring cars. Cape cart covers (or three bow tops).

The Sprague Umbrella Co. NORWALK OHIO



Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

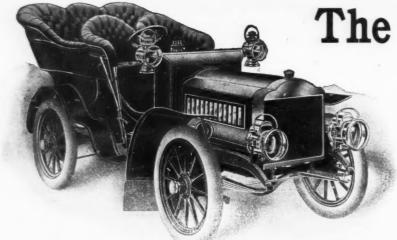


A Tire with a Reputation

The G. & J. Tire has quality in its construction and years of experience in detachable tire construction back of it.

G&JIRECO.

Indianapolis, Ind.



The Thomas "Flyer"

TOURING CAR

\$4000.00 for \$2500.00. Beauty and Efficiency. Lightness, Strength, Power.

3 Cylinders. 24 Horse Power. 2000 Lbs. 50 Miles.

MANUFACTURED BY

E. R. THOMAS MOTOR CO.

1202 Niagara St., Buffalo, N. Y.

Members of Association of Licensed Automobile Manufacturers.

NO STOP=OVERS

ALLOWED



Do your touring in one of the St. Louis "Rigs that Run" and you don't need them. The St. Louis combines

SIMPLICITY, ELEGANCE, DURABILITY

What more do you want? We can give you anything from the Doctor's Favorite—our standard car—to the three cylinder, which beats them all. Write for catalog.

St. Louis Motor Carriage Co. St. Louis, Mo.

THE CHAINLESS

Proposition For Live Agents

A FEW OF ITS CHARACTERISTICS ARE

Bevel gear drive with sliding gear transmission, three speeds ahead and reverse.

Speed range from 6 to 35 miles an hour.

Long wheel base.

Large, high back tonneau.

Finest leather upholstering.

Space under tonneau floor to carry extra tire, rain covers, etc.

Brakes positive and operated by foot.

Wheels wooden of heavy artillery pattern, and fitted with 30x3½—

inch Dlamond Tires.

Ignition by jump spark, automatically controlled

Sight feed oiling device on dash; 500 miles on one oiling.

Beautiful in appearance and handsomely finished.



PRICE \$1750

The Reid Mfg. Co., Detroit, Mich.

New York Agents: HORACE B. DAY & CO., 60 W. 43d St., near 5th Ave.



If a better car than the Yale can be bought in America for the same money it was not shown at any of the great Automobile Shows. If there is a car as perfect, at the price, it has not been heard from this season. Dealers, drivers and prospective purchasers with one voice pronounce it the happy medium between the noisy, inefficient runabout, and the ponderous, unwieldly racing machine.

We merely echo expert opinion when we say that the Yale is quite alone in its class—a model

family car at a moderate figure.

¶ We expect you to see and inspect the Yale, but if you'll send for our book it will help you to appreciate this splendid car.

THE KIRK MANUFACTURING CO. 955 Oakwood Ave. TOLEDO, OHIO

Members Association Licensed Automobile Manufacturers



STEVENS-DURYEA

Gasoline Automobile "IT STARTS FROM THE SEAT"



SIMPLICITY and efficiency. Has a two-cylinder, seven horse power motor of the four-cycle type. The motor is readily started by means of a short crank attached to the steering post. A child can easily start a

"STEVENS-DURYEA"

Automobile virtues are combined in our car to a rare degree. Price at factory, including \$130 complete equipment Send for illustrated catalog.

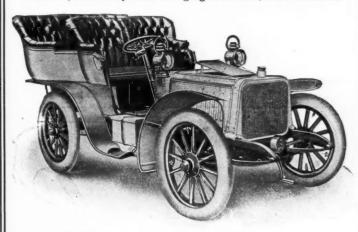
J. STEVENS ARMS & TOOL CO.

705 MAIN STREET CHICOPEE FALLS, MASS., U.S. A.

Member Association Licensed Automobile Manufacturers.

DARRACC **MOTOR CARS**

Triumph over them all-First in Records, First in Sales, First in Reliability. 12, 15-20, 24-28, and 30-35 horse-power. Any style body desired. The Double Phæton, with side entrance, and Tulip with swinging front seat, are the leaders



Model 1904 "King of the Belgians" Four-Cylinder Touring Car in 15-20, or 30-35 horsepower.

American Darracq Automobile Co. Controlled by F. A. La Roche Company Sole Agents and Licensed Importers under Selden Patent 549160.

652-664 Hudson St. and 147 W. 38th St., New York

- AGENCIES -

Chicago, RALPH TEMPLE AUTOMOBILE CO. Detroit, W. A. RUSSELL & CO. Philadelphia, 262 N. BROAD ST-

CHIGAN Light Runabout

A Practical Vehicle at a Popular Price



\$475.00

Will take two people almost anywhere, up hill or down, or on the level, at a 4 to 20 mile clip. Luggage box in front. Carries fuel for one hundred miles. 3½ Horse Power Gasoline Motor, air cooled by fan; starts from the seat. Sensible, Serviceable, Simple, Safe.

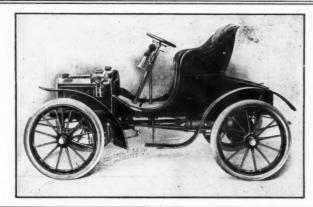
Just what you have been waiting for

Get the Michigan Booklet and learn all the facts about this interesting vehicle.

Michigan Automobile Company, Ltd. Kalamazoo, Mich., U.S.A.

"THE COVER"

THE IDEAL LIGHT CAR FOR TOWN OR COUNTRY



Superior in Construction, Efficient Under All Conditions, Artistic in Design, Thoroughly Up-To-Date. Simplicity, Reliability, Lightness and Strength are combined in its makeup. Chainless Drive, Vertical Motor, Slide Gear Transmission, Cellular Cooler, and many more good features found in no other car at the price.

Price, \$650

SEND FOR CATALOG

COVERT MOTOR VEHICLE CO. LOCKPORT, N. Y.

in-com' pa-ra-ble, excellent beyond comparison; unapproachable in kind, character or degree; matchless in design and work-

> THE INCOMPARABLE WHITE CLEVELAND, OHIO

The FORD T'S not necessary to pay \$1500 to \$2500 for an Automobile simply because it is called a "Touring Car." The question is what kind of a machine will best suit your need. The Ford has proved by daily use that it is rightly named "The Car of Satisfaction." Actual service is the only test of a car's touring qualities. It's better to be able to **travel** in the Ford than to have an expensive so-called "touring car" that won't go. Price with Tonneau, \$900 | As a Runabout, \$800 We agree to assume all responsibility in any action the Trus t may take regardi: a alleged infringement of the Selden Patent to prevent you from buying the Ford—"The Car of Satisfaction" Write for illustrated catalogue and name of our nearest agent. FORD MOTOR CO. :: DETROIT MICH.

APPERSON



Our twenty-four horsepower, two-cylinder opposed motor located under bonnet is the most powerful two-cylinder motor used on any car made. Easily as accessible as any four-cylinder motor. A large, roomy car for either four or six passengers. Early delivery for those ordering promptly.

The Best Car Built in America For the Average Man to Run

Write for prices and deliveries

Apperson Bros. Automobile Co., Kokomo, Indiana Licensed Under Selden Patent

GHIGAGO BRANGH: 394 Wabash Avenue



Appeals to posted buyers, is well designed and high grade throughout—a guarantee of satisfaction and economy. It possesses an abundance of power, has large wheels, large tires, long wheel base, and many other superior points.

IF YOU ARE INTERESTED, WRITE US

Premier Mfg. Co. INDIANAPOLIS, IND.

JOHN WANAMAKER, New York and Philadelphia Distributor, ARTHUR G. BENNETT, 20 Lake Street, Chicago Distributor.



E PUBLISH a little booklet which is probably the most unique production of the year in automobile literature. It is a matter-of-fact, convincing little book that tells in a clear, comprehensible way the difference between the Elmore one-cylinder two-cycle engine, and the two-cylinder four-cycle engine of any other type.

This little book is doing much to interest prospective buyers in the Elmore and investigation nearly always means a sale. Suppose you let us send you the book? You ought to know more about this beautiful, speedy little car, anyway.

The Elmore Mfg.

Members of the Association of Licensed Automobile Manufacturers.

804 Amanda Street, CLYDE, OHIO

The STUDEBAKER **AUTOMOBILE**

ELECTRIC

With Exide or Edison Battery

RUNABOUTS SURREYS DELIVERY WAGONS STANHOPES VICTORIAS AND TRUCKS

GASOLINE

TOURING CAR-Light and Powerful

"The Automobile with a Reputation Behind It"

Write for Catalogue to

STUDEBAKER BROS. MFG. CO.

Automobile Dept., SOUTH BEND, IND.

NEW YORK CITY, Broadway, cor. 48th St.
DENVER, COL., cor. 15th & Blake Sts.
CHICAGO, ILL., 378-383 Wabash Ayenne.
SALT LAKE CITY, UTAH, 157-159 State St.
KANSAS CITY, MO., 810-814 Walnut St.
PORTLAND, OPE., 330-334 E. Morrison St.
SAN FRANCISCO, CAL., cor. Market & 10th StsDALLAS, TEXAS, 317-3 9 Elm St.

Would You?



Oakland, Cal., 27th Oct., 1903.

The Graham Co.,

Park Sq. Auto Station, Boston, Mass.

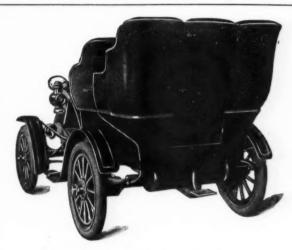
Dear Sirs: I notice your "ad" of the GRAHAM Supplementary Spiral Springs, and as I am tired of paying for broken leaf springs for my touring car I will try your springs which you will ship to me by Wells-Fargo, C.O.D., with full instructions to apply the same. Yours truly,

This is the regular thing by every mail.

WOULD I?

THE GRAHAM CO.

41 Columbus Ave., BOSTON, MASS., U. S. A.



 \mathbf{If} You Want a Car

So simple a child can run it So strong it will stand any kind of usage So powerful it will climb any hill So comfortable you can ride in it all day without being tired So well built it will stay out of the repair shop

Get the Dawson \$1,500

16 B. H. P., two-cylinder upright motor, spur gear and positive clutch transmission, chain drive—no side levers, long wheel base—seats as roomy and comfortable as a Davenport, high grade, honest work and material, su-

CATALOGUE FOR ASKING.

J. H. DAWSON MACHINERY CO.

Canal and Washington Streets,

CHICAGO, ILL.

After you have tried other lamps and found them wanting, investigate the

Richmond Hutomobile Lamps

They will suit you.



Richmond Lamps are better than other lamps because they are made better—on better principles—they give more light and wear longer.

Our catalogue No. 4 tells all about them. Shall we send it to you?

Richmond, Ind. Mfg. Co.

DIETZ

Lucifer Gas Lamp





As simple to use and operate as an oil lamp. Send for circular about it and our new styles of

OIL LAMPS



R.E.DietzCo.

37 Laight St. New York, - N. Y. ESTABLISHED 1840



The Graflex Camera

> Should be a part of every Automobile Equipment.

Pictures As you see them while you see while you see them at the desired moment No Guess Work

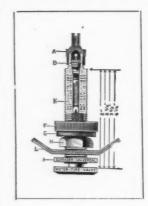
Ask your dealer to show you our goods or write to

The Folmer @ Schwing Mfg. Co.

407 Broome St.

NEW YORK

The GRAFLEX Camera is used and recomme nded by the photograph staff of the MOTOR AGE.



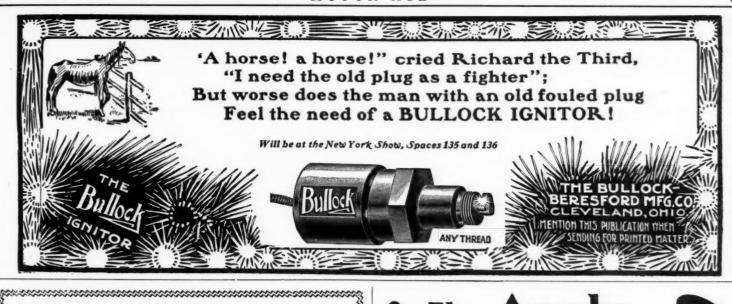
Schrader Universal Valve

Simple and Absolutely Air Tight

Motor Tire Valves, as shown in cut, are made in four lengths as shown. Cut is exactly half size of the 2-inch valve. Supplied to the trade by all Tire Manufacturers.

o MANUFACTURED BY o-

A. SCHRADER'S SON, 30-32 Rose St., NEW YORK



Can be Easily and Quickly Repaired n the Road. Only tool

to remove

Tire is a Small

Wrench

.·OVERCOME TIRE TROUBLES..

Air Chambers Entirely Above Rim.

Simply **Removing Bolts** Allows Free Access For Repairs.

SIMPLICITY IS THE IMPORTANT FEATURE.

> Mechanically Fastened so that Tire Cannot Roll or Creep.



Fisk Rubber Company CHICOPEE FALLS, MASS.

Branches and Repair Depots:

Boston, Washington, Chicago, Denver, Springfield, Syracuse, St. Louis, San Francisco, New York, Buffalo, Omaha, Los Angeles, Philadelphia, Detroit, Minneapolis, London, Eng.

The Apple The Time Will Come When every gas engine that leaves the factory will be equipped with The Apple Ignition Dynamo The Fairbanks, Morse Co., Chicago, are attaching them to every gas engine they make. The Apple Ignition Dynamo is the most perfect method of igniting. Always reliable. No trouble starting engine; makes hotter, steadier spark that gives same more power and speed. Attached in a moment to any automobile. Dirt, dust and oil proof. Write for particulars.



THE DAYTON ELECTRICAL MFG. COMPANY, 75 Rishold Building, DAYTON, OHIO

A Guarantee of Gear Quality

is the above trade mark. It shows that we cut the gears on which it appears and guarantee them to be the accurate kind that transmit power with the minimum amount of waste. Let us quote you prices.

THE NEW PROCESS RAW HIDE CO., SYRACUSE, N. Y.



THE OLD WAY

The Hill **Automatic** Starter

Can be attached to any Gasoline Car.

The operator mounts the car, pulls a small valve lever, throws in the clutch and the car moves off.

Write us what car you use, and we will tell you all about it.

THE STEEL BALL COMPANY 840 Austin Ave......Chicago, Ill.



THE NEW WAY

Forty Miles an Hour On A Dark Road

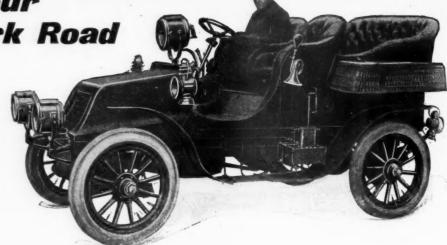
The Famous

Rushmore Searchlig

ton car shown herewith, with two 8-inch and one o inch Lens-Mirror Searchlights and the locomotive type generator shown at the side, can go anywhere at top speed, and the darker the night the greater the safety.

Ask the Winton Co. about it.

RUSHMORE DYNAMO WORKS, Plainfield, N. J.



IS SYNONYMOUS WITH

Quality in Motors

Single Chain Drive Transmission. Double Chain Drive Transmission. Center Shaft Drive Transmis-

It's a two-cycle; i'ts a success. One water inlet, one outlet, one fuel inlet, one exhaust.

Automobile Motors from H. P. to 24 H. P.

For Prices and Points of Merit, Address

Merit, Address
OTOR CO.
- BUFFALO, N. Y. LACKAWANNA MOTOR CO.

50 Letchworth Street.

Kelecom Motors **Autolyte Gas Lamps** Automobile Horns

Send for Catalogue and Prices.

A. H. FUNKE, 325 Broadway, N.Y.

The Edisonia Non-Soot-Proof Spark Plug



During our extensive experience with the so-called soot-proof spark plugs, we have found that it is impossible to construct an absolutely soot-proof Plug, and with this idea in view we have constructed a plug that is as near soot-proof as possible to make, and one that can be cleaned, taken apart and replaced in a minute by simply removing one nut. We use no packing, cement or other useless articles, and our plug will hold compression better than any plug now on the market. All nexts of the pluggare allowed the market, All parts of the plug are allowed

to expand.
Order one of these Edisonia Non-Soot-Proof Spark Plugs and enjoy your ride without having ignition troubles.

The W. L. EDISON AUTO SPECIALTY CO. 717 Thirteenth Street, Washington, D. C.



Evinrude Motors

Prompt Deliveries, Prices Right.

Motor Car Power Equipment Co. 279 Grove St., MILWAUKEE, WIS.

The Automobile Supply Co.

Successors to The P. J. Dasey Co.

19 LaSalle Street, - CHICAGO, ILL.

We turnish everything necessary to build an automobile including motors 5 to 20 H. P. Send stamp for our cata-logue of supplies.

AUTOMOBILE Send for Catalog

GRAY & DAVIS AMESBURY, - MASS. Makers of Good

Perfect Ignition



Ruckert Storage Battery Igniter

Any Voltage or Capacity Send for Booklet and Prices

G. R. RUCKERT 13 E. 39TH ST. NEW YORK CITY

Why not have the BEST Jump Spark Coils?



We make them for Automobile, Launch and Stationary Gas and Gasoline Engines. Our booklet yours for the asking.

THE INDUCTION COIL CO. 9 Miller Bldg., Milwaukee, Wis.

Agencies: The Sta-Rite Co., Room 30, 529 Broadway, N. Y.; Neustadt Co., St. Louis; F. Bissell Co., Toledo; 435 Wabash Avenue, Chicago; R. McQuat, Indianapolis.

Have a care

for the lubrication of your Auto. It is of prime importance and Dixon's Pure Flake Graphite offers the best solution to its diffi-culties. Send for booklet &2 C, and sample. JOSEPH DIXON CRUCIBLE CO., - JERSEY CITY, N.J.

NICKEL PATE The New York, Chicago & St. Louis R.R.

Three Trains Daily

FT. WAYNE, CLEVELAND, ERIE BUFFALO, NEW YORK and BOSTON

No Excess Fare on any Train on Nickel Plate Road.

Meals in Dining Cars on American Club Plan from 35c to \$1.00. Also a la carte,

Depot: La Salle St. Station, Chicago City Ticket Office, 111 Adams St.

IOHN Y. CALAHAN, Gen. Agt., 113 Adams St., Chicago

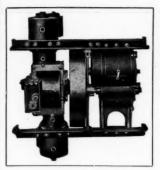
Phone Central 2057

MOTOR AGE

Gets the News :: Get Motor Age :: \$2.00 a Year

1303 MICHIGAN AVE. - CHICAGO, ILL.

Model Engine AND TRANSMISSION



If you are interested in an engine built mechanically correct with all bearings adjustable, with large valves, large water jacket and a five speed transmission of simple design, built by one of the largest manufacturers of stationary engines in the United States, write us for catalogue of automobile engines.

We also build engines for all other purposes in sizes from 2 to 100 H. P.

Model Gas Engine Company

AUBURN, INDIANA

LOS ANGELES, CAL.

Built for American Roads

Mud, Sand and Hills shrink before it. A model of simplicity. et, Safe, Powerful and Economical. More power per pound than any other car on the Quiet, Safe, Powerful and Economical.



market. Cylinder 4 1/8 x 5 1/4. The only Runabout equipped with sliding Gear Transmission on the market to-day. Agents wanted. Write for prices and catalogue.

Sandusky Automobile Co., Members of the Association of Licensed Automobile Mfrs.

SANDUSKY - - OHIO

The Largest Manufacturers of Automobile Parts in America invite the assemblers' attention to their new prices





We supply parts and sundries of every description

. H. NEUSTADT CO. 826-28-30 South 18th St. ST. LOUIS, MO.



Double opposed cylinder, gasoline engines; Horizontal type. Perfectly balanced.

Practically no Vibration

Perfect throttling carbureter on all engines. 6, 10 and 15 H. P. Also 4 H. P. upright marine engine. Improved carbureters and other accessories.

THE WESTERFIELD MOTOR COMPANY

Main and 16th Sts., ANDERSON, IND.

MUD GLAT

To Fit Oldsmobiles Or Other Runabouts.

With Forged Irons Ready to Attach.

QUICK DELIVERY ON ONE SET OR 500 SETS.

Interesting Prices if Ordered at Once.

WILSON & HAYES MFG. CO., 750 Bellevue Ave.. Detroit, Mich.

Most Good American Devices are Copied From the French



YOU WANT THE BEST, OR ORIGINAL, OF COURSE

Electrical apparatus for Automobiles carried in stock.
A Catalogue for the
Asking.

J. LaCoste Et Cie., Paris

LEON RUBAY,

136 W. 38th St, - NEW YORK Agent for Mass. and R. I.
ORIAN SUPPLY CO., 43 Columbus Avenue, BOSTON

Start the New Year Right.

USE THE

SALISBURY
IMPROVED
ARTILLERY
WHEELS

On your 1904 cars. Advantages: No Shearing of bolts, spokes in perfect alignment, absolutely tortion proof. Stock patterns for standard cars, or we make them for special designs.

Salisbury
Wheel & Mfg. Co.
JAMESTOWN, N. Y.

これできる かんきん あんえん あんかん かんしょう

Tiffany Ave.

JAMESTOWN, N. Y.

C. COLES DUSENBURY & SON, Manuero

396 & 398 Broadway, New York City

We Manufacture CARRIAGE Carpets and no other kind :: Send for samples



Going to Ride? For Pleasure? How can you enjoy it while in constant fear of collapsed tires? On Business? Time is money, and you want no mishap on the way. The Tennant Pneumatic Puncture-Proof Tire on your auto guarantees both pleasure and safety. It can neither be punctured nor deflated by cracking or breaking of the inner tube. Our free catalogue, sent on request, tells all about it.

Tennant Auto Tire Co.

BRANCH OFFICES: (136 W. Main St.) Springfield, Ohio
Tennant Auto Tire Co., 1900 Broadway, n. e. cor. 63d St.
Tennant Auto Tire Co., 1428 Wabash Ave., Chicago, Ill.
C. W. Potter, 69 Portland Place, Mont Clair, N. J. Pacific Coast:
Cor. 3d and Los Angeles Sts., Los Angeles, Cal.

Indian Motocycles



HENDEE MFG. CO. SPRINGFIELD, MASS.



STUFF" SPLITDORF o COILS :::

That's all.
They tell the rest.

C. F. Splitdorf, 17 Vandewater St, NEW TORK.

Portable Auto, Houses

Has it ever occurred to you that the cost of storage for the next few months would pay for your own house? Write for cuts and sizes to

SPRINGFIELD MOULDING WORKS Springfield, Mass.

are things of beauty and joys forever

ASK FOR CATALOGUE

THE F. B. STEARNS CO.

Euclid Ave. & N. P. Tracks CLEVELAND, OHIO, U. S. A.



Why

hesitate in getting a coil when the DOW COIL is acknowledged to be the best coil in the market and is used on all the best machines?

Over 300 Styles to select from.

Write for catalogue to

Dow Portable Electric Co. BRAINTREE, MASS.

Chicago Agents: THE P. J. DASEY CO., 19 La Salle Street

Aluminum Automobile

Parts a Specialty

The Pittsburgh Reduction Company Pittsburgh, Pa.

KINGSTON CARBURETER



Gives perfect on ntrol over
motor and
furnishes
perfectand
nifor m
mixture at
all speeds.
Throttle
consists of
fuel needle
point valve
and air regu i a tin g
valve, both
acting to
gether by
one lover,

BYRNE, KINGSTON & CO. KOKOMO.



SEE OUR AD IN THIS ISSUE

Booklet on application **IGNITOR**

THE BULLOCK-BERESFORD MFG. CO., Cleveland





Grimy Hands

Been Tinkering Your Auto?

Use GRE-SOLVENT

It instantly dissolves and removes the blackest grease, leaving your hands white and smooth. No acids, no alkalies. Harmless. Collapsible tubes or tin boves by mail prepaid 15 cents and 25 cents.

Samples Free

The Utility Co.

232 Greenwich St.,

New York

Lamps, Horns, Goggles, Spark Plugs, Pumps, Oilers and Grease Cups.......

The Finest of Everything. EMIL GROSSMAN,

EXCLUSIVE IMPORTER.

Dept. M.

298 Broadway, New York.

THE STERLING ELLIOTT BALL-BEARING

NOISELESS AND FRICTIONLESS. THREE SIZES-10, II and 12 FEET DIAMETER 3,000 LBS. CARRIES

GIBBS-BROWER CO., Sole Agents

150 Nassau Street, NEW YORK

One of these Turn Tables can be seen at the new salesrooms of the WINTON MOTOR CARRIAGE CO, 1706 Broadway, New York.

The Hussey Drop Forging & Mfg. Co. Cleveland,

Ohio. . Manufacturers of

Steering wheels Solid, tilting and sliding Radiators, Circulating pumps ling devices, Drop Forgings

Steering knuckles Parts forrunning gears Machine Forgings and Magic funnel

Our specialty-We manufacture nothing but Carriage dry goods-WHIP-CORD-SATIN-LACE, etc., etc.

Oiling devices,

The largest variety, colors, styles and grades in the U.S. Samples sent.

C. COLES DUSENBURY & SON, 396 & 398 Broadway, N.Y. City



Steering Knuckles Rear Axles Artillery Wheels Front Axles

Only Roller Bearing capable of taking up all wear. Warranted for two years.

TIMKEN ROLLER BEARING AXLE CO.. - - CANTON. OHIO

A Chicago Gasoline Storage Outfit

is Safe and Economical



Avoids waste and evaporation. Reduces insurance hazard. Durable and easily operated. Reasonable in price. :: ::

All Claims are Warranted. Write for Particulars.

Chicago Gasoline Storage Co. 521 Wabash Avenue, - CHICAGO, ILL.



WESTON ELECTRICAL INSTRUMENT CO.,

Electrical Measuring Instruments.

Electrical Carriages and in Charging Stations Send for Catalogue.

WORKS: - Waverly Park, NEWARK, N. J. New York Office, 74 CORTLANDT ST.



ard Ins't Type K.



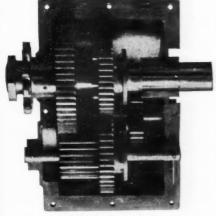
Warner Differential Gears

All Sizes for Both Sprocket and Bevel Gear Drive. Satisfaction or "No Pay"

WARNER "DOUBLE TILTING" STEERING WHEEL Send for Sample on Approval. Cat. Free.

Warner Gear Co., - Muncie, Ind.





The BUCKEYE

SLIDING CEAR TRANSMISSION

NO GEARS IN MESH ON HIGH SPEED

Buckeye Motor Co. COLUMBUS, OHIO



You Save \$1,000,000

worth of trouble by wiring up properly. We send you a complete assort-ment of terminals with full instruc-tions for 60 cts., postpaid.

THE BEST STEEL BEST WORKMANSHIP Make the Best Rims Electrically Welded



The Best Rims bear this Stamp and are made by

WESTON-MOTT CO. UTICA. N. Y.

STANDARD AUTOMOBILE PARTS

Pressed steel frames, pressed steel hubs, malleable hubs, brakes, steering gear, chains, transmission gears, engine cranks, mufflers, front axles (tubular and forged), rear axles (chain and bevel gear drive), electric truck parts. FEDERAL MANUFACTURING COMPANY, CLEVELAND

SELLING AGENT-HAYDEN EAMES, American Trust Building, Cleveland

DEPOTS FOR THE PROMPT DELIVERY AND CARE OF EXIDE BATTERIES.

. Philadelphia. Pa.

SALES OFFICES:

New York,

Chicago,

St. Louis,

Cleveland.



Smith& (Dabley Inc

Seventh Ave., bet. 37th and 38th Sts., New York

Unquestionably the Finest Automobile Lamps in the world. Imitated everywhere.

Send for Information and Prices.

Address Wholesale Dept.

AMERICAN Indestructible Sparking Plugs



Stand the Test where all others are Knocked Out of Business. Every one we sell brings us more business. This fact shows what they are. The Original and Only Double Insulated Pure Mica Core. All others are worthless imitations.

AMERICAN COIL COMPANY WEST SOMERVILLE, MASS.

AUTO SUPPLY CO., Broadway, Cor. 50th St., New York Agents.

WINTON COLUMBIA Telephone Main 2179 FRANKLIN

BATES-ODENBRETT AUTO CO.

Wisconsin Distributors

Cor. Broadway and Biddle St. MILWAUKEE, WIS.

STORAGE, CHAEGING, REPAIRING

Engines, Transmissions, Carbureters, Pamps, Lubricators, Steering Wheels, etc.

The Rutenber Motor

More Power, Less Parts and No Vibration. Superbly Built, and of the Best Material.

THE WESTERN MOTOR CO., Logansport, &

Motsinger Auto-Sparker

Generator for Electric Ignition. Guaranteed for One Year.

Double Opposed and Single Cylinder Motors, 5x5. DIFFERENTIALS, STEERING WHEELS, Etc.

P. J. DASEY, Mfg'rs Agt., 435, Wabash

The Turner Vacuum System
of Carburstion and System
of Carburstion and Sustem
of Carburstion and Fact Steel
(not dependent on the fickle action of a Host)
constitutes the only Carbursting System
with which the Hydro-Carbon Motor
can or ever will be made reliable
and perfect in its action

Hore Power with less Fuel Consumption
absolute Reliability

Send (Turner BrassWorks) Bradenter
No. 3 59 Michigan St. Chicago

AUTO-

Our Auto trimming leather is used by many of the largest manufacturers because they find it superior to any other leather tanned.

Send for sample and price.

AMERICAN OAK LEATHER CO.

176 SOUTH STREET, BOSTON.

CHICAGO.

CINCINNATI.

ST. LOUIS

DYNO Dissolved in Gasoline will

INCREASE THE POWER OF YOUR MOTOR 5 to 15 PER CENT Sample and full directions, 25c.

AUTO AGGESSORIES GO., Box 153 Gleveland, O,

SPECIAL BARGAINS IN

LIMOUSINE AUTO BODIES

Suitable for Toledo, Winton, Darracq and Cadillac machines. Also Coupes for lighter machines. Canopy tops of all kinds made to order.

LIMOUSINE AND CARRIAGE MFG. CO.

542 WABASH AVENUE, CHICAGO.

!!Sprocket and **Bevel Gear** Drive **Automobile** Rear Axles.



Russell Manufacturing Co.

INDIANAPOLIS, IND.



Unexcelled for ignition

ROGKAWAY DRY STORAGE BATTERY

We manufacture Automatic Charging Switches, also Rectifiers for Alternating Current.

ROCKAWAY AUTOMOBILE CO., Rockaway, New Jersey

LAMINATED WOOD BODIES—SEATS—MUD GUARDS Let Us Quote You Prices on These Goods.

THE AUTO BODY CO., LANSING, MICH., U.S. A.

AUTOMOBILE **PARTS**

METAL STAMPING

MANUFACTURERS ATTENTION!

We are now making contracts for all kinds of machine work, metal stamping, special tools and dies, also complete parts. You undoubtedly have a certain amount of work

. CLEVELAND, OHIO.

on hand, which could safely be made outside of your own factory, which would be of some assistance to you and for which we may be especially adapted. Our specialty is Centraet Work. Write us.

Ball Races, Dust Rings, Retainers Radiator Discs,

MOROC

OTTO KONIGSLOW, . .

Only kind of Leather USED FOR FINE VEHICLES C. Coles Dusenbury & Son

396 & 398 Broadway :: NEW YORK CITY

POWER-RESULTS



8 H. P. 2 Cvl. ALUMINUM CASE GOVERNED.

Motors, Transmissions, Carbureters, Plugs, Coils, etc. Lists on Application.

H. P. NIELSON, ST. JOSEPH, MO.

ATWOOD

ATWOOD MFG. CO., Makers

Transmission Gears Sliding Gears **Connecting Clutches**

COLCORD UPTON, Office: 144 W. 39th St., NEW YORK CITY

Herz Oscillum



Will make any spark plug spark. Money refunded if not satisfactory.

Send 50 cents for one today.

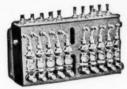
EMIL GROSSMAN,

Dept. M.,

298 Broadway New York.

HOFELLER BRASS FOUNDRY CO. BUFFALO, N. Y.

OUR ALUMINUM CASTINGS FOR AUTOMO-BILES ARE SATISFACTORY. WHY NOT TRY



MACHINE LUBRICATION

Obtains Ideal Results. Manufacturers Send for JOHN F. McCANNA CO.

McCORD & CO., Lessees, 0ld Colony Bidg., CHICAGO.



PROCKETS

And Equalizing Gears

In stock or to order. We can save you money. NO ORDER TOO SMALL OR TOO LARGE. Catalogue free.

CULLMAN WHEEL CO. 521-525 Larrabee St., - CHICAGO.

E. J. AUTOLIGHT \$7.50



WITH GENERATOR \$15.00 gives as powerful a light as any lamp made. Burns for 8 hours.

E. J. SPARK GAP 50c. Points enclosed in glass tube. E. J. WILLIS, 8 Park Place, NEW YORK.

WILLARD STORAGE BATTERIES

IMPROVED-LIGHT WEIGHT THE WILLARD STORAGE BATTERY CO. CLEVELAND, OHIO

CHICAGO AUTO AGENCIES

SUPPLIES

CATALOG THE MOTOR CAR SUPPLY CO. 1427 MICHIGAN AVE.,

Geo. A. Crane, Manager

Knox Auto Company 529-531 Wabash Ave. Phone, mar. 4374

WATERLESS KNOX CAR'S

SINGLE AND DOUBLE CYLINDER U Tonneaus, Surreys, Runabouts, Physicians' Cars, and Delivery Wagons.

"FORD AUTOMOBILES"

8 H. P.—2-Cylinder—Opposed
Runabouts, - \$800.00 | With Tonneau, - \$900.00 "ROYAL TOURIST"

2-Cylinder Vertical, 18 H. P. - - - - \$2300.00 4-Cylinder Vertical, 35 H. P. - - - - 3000.00

ILLINOIS MOTOR CAR CO. Telephone South 512. 1407 Michigan Ave,

RALPH EMPLE Nautomobile Co.

"FRANKLIN" "DARRACQ"
"NORTHERN" "STEVENS-DURYEA"

Agents Wanted 293-295 Wabash Avenue



We Counted Them!

There were 331 motor cylinders with spark plugs in them at the Chicago Auto Show. The STA-RITE was in 103 of these cylinders, and there were exactly twenty-nine different makes of plugs. The reason is—because they stay right longer than any other. We sell each of the seventeen sizes and parts by number and show twelve half-tone cuts in our catalogue. Get one right away.

Auto Jacks and Auto Clicks.

DETROIT MOTOR WORKS DETROIT, MICH.

THE STA-RITE CO., 529 Broadway, New York and leading dealers

Era in Jack Making



Folding Auto and Carriage Jacks

Remodeled and improved. To range from 8½ inches high up to highest carriage wheels. **Not equaled by all others on earth bunched.** Send for Catalogue JERSEY BRAKE CO., - Newark, N. J.

Please Mention Motor Age



Best Spring Seat in the World.

Used by many of the leading manufacturers. Requires no frame, burlap or webbing. Will retain shape for years. Send for descriptive matter.

F. H. THOMPSON.

36-38 Elm Street.

BEST QUALITY.

PORTLAND, ME.

LOW PRICE.

GREER MOTOR CAR CO. Harrison 2200

SELLING The Courier

FOR The Courier

508-508 Wabash Avenue, Chicago

BENZ & CO. MANNHEIM, GERMANY
THE OLDEST AUTOMOBILE MAKERS IN THE WORLD
FIRST CAR PATENTED JANUARY 29, 1886
OVER 4.000 NOW IN SUCCESSFUL OPERATION
PRICES, \$3,500 to \$15,000
ALL CARS IMPORTED COMPLETE LESS TIRES)
IMMEDIATE
EXCLUSIVE AGENTS TON U. S.
BELLVERY MEAD CYCLE CO., CHICAGO

HENRY J. ULLMANN

Temporary Salesroom: 504 WABASH AVE. Chicago Agent for

White Touring Cars

ABSOLUTELY NOISELESS

Secure a Demonstration.

The Orlando F. Weber Go. Distributors of



Milwaukee Store: Chicago Store: 390-392 Wabash Av. 321-325 Fourth St.

NATIONAL ELECTRIC PROMPT CADILLAC. DELIVERIES. STEARNS GASOLINE CADILLAC AUTOMOBILE (O. OF ILL TEL SOUTH 2049 1312 MICHIGAN AVE CHICAGO

Hayden Automobile Co.

1337 MICHIGAN AVENUE CHICAGO

NATIONAL TOURING CARS QUEEN LIGHT CARS

Long Distance Telephone South 2

faramananian il PARDEE & COMPANY

1404-6 Michigan Boulevard Tel. Calumet 2523

PACKARD YALE ELMORE BUFFALO ELECTRIC STANHOPE DUTTABO ELECTRIC STANHOPE

DAN CANARY AUTOMOBILE CO.

521 TO 531 WABASH AVENUE

Largest and Best Equipped Salesroom and Garage in Chicago

Agents for the SANTOS-DUMONT

THE DOWN TOWN STORE"

20 LAKE ST. Phone Central 3361 Open Day and Night. Storage by the Day or Month. Thoroughly Equipped Machine Shop. Only one in the city devoted to Automobile Work.

The "Premier"-16-20-40 H. P.

ARTHUR G. BENNETT



Dr. (?) A. L. Dyke is a Specialist in

the Diseases of Automobiles

If your machine bucks, balks or has the symptoms of ague and other "non gone" diseases, then you should consult the doctor. We carry the largest line of imported and domestic Automobile Supplies in America Get our monthly 48-page Bulletin. Our catalogue contains 180 pages, over 1,000 illustrations of Automobile Supplies.

Send 10c to cover postage if not a dealer.

A. L. Dyke Automobile Supply Co. 1402 PINE STREET, ST. LOUIS, MO. First Auto Supply House in America. SECOND-HAND AUTOS.

Eclipse Pocket Ammeter

for general battery testing, 0 to 15 amperes. Soft-Iron Solenoid type. Ready to use, with fiexible cord attached and contact spur in case, which is drawn back into case, when carried in pocket. The contacts, on both cord and case, are made of non-corrosive metal. Size of watch and very light weight. Pivots hardened and polished, Weil finished throughout, can be used in any position. Particularly designed for Auto use.



Eldredge Electric Mfg. Co. Main st. Springfield, Mass.



Equal to the very latest French productions—Up-to-date Engines and Transmission Gears. Air-cooled and Water-cooled Motors. Air-cooled motors. 1 to 3 cylinders, 2 to 15 h. p. Water-cooled Motors, 2 to 8 cylinders 10 to 40 h. p.

Trebert Gas Engine Co. 160 Main St. W., Rochester, N.Y. Brandenburg Bros. & Alliger selling ag'ts, 103 Reade St., N. Y., 85 Lake St., Chicago.

Mechanical Engineer, Automobile Expert.

JOHN C. HIGDON, Asso. Am. Soc. M. E. Twenty-five years' experience. Eight in Auto Building. Have designed many successful Engines and Autos complete. Write me for advice on your bard problems.

EEFERENCES FIRST CLASS.

To Buyers: Ask me to name the best car for a given price. Am not biased in favor of St. Louis or any other builders. Address: 605 Mo. Trust Bldg., St. Louis, Mo.

MOTORAGE

Gets the News Get Motor Age \$2.00 a Year

1303 Michigan Avenue, Chicago

MISCELLANEOUS.

ADVERTISEMENTS under this head 3 cents per word first insertion; 2 cents per word each in-sertion thereafter. Cash with order. Express orders, postoffice orders or stamps received.

FOR SALE—Cadillac, Model A 1904; never been run; clincher tires; \$800 cash if taken imme-diately. Address Cadillac, care Motor Age.

IF YOU ARE NOT IN A HURRY—don't order new batteries until you have seen the Haschke Compound storage battery.

FOR SALE—New Locomobile; box front, latest style; all latest improvements; tires never punctured; perfect in all respects; run less than 500 miles; cost \$950. Will be sold at a bargain. F. H. Morrill, Rochester, Minn.

FOR SALE—Winton, 1903; splendid condition, recently through shop for full repair, engines, etc. New canopy top, finest in Chicago, brass standards, plate glass front; 3 large gas headilghts, 2 brass side lights, brass tail light, fine baskets, etc.; stands owner over \$3,000; great bargain, \$1,700. Call at Room 1005, La Salle St. station.

FOR SALE—One set 28x2½ Oldsmobile wire wheels, \$10. One set 28x3 Midgley artillery wheels, with steering knuckles, \$25. One set 28x 2½ tires (new), \$35. E. R. Kent, Dixon, Ill.

WANTED—Knox model C, with top; the best \$600.00 will buy. Also 2-cylinder Knox surry. Will pay \$1,300.00. Give particulars. Address Will pay \$1,300.00 H, care Motor Age.

'PACKARD Voiture Legere, latest Model L, four cylinder, for sale at a premium. What am I offered? About May 1st delivery. Would be glad to hear from Packard agents or others interested. Address "Opportunity," care Motor Age.

FOR SALE—18, 22 H. P. 3-cylinder gasoline touring car in first class condition; will be sold to the highest offer. The engine is entirely new (replacing a 2-cylinder engine). Governs three speeds forward, one backward. Hand and foot brake, entirely new bushings and gears, side baskets, lamps, horn, reserve casings and tires. Want to sell for reason of buying a foreign machine. Address F. 2126, care Motor Age.

CASTINGS for bicycle motors, 1¼ h. p., \$7; 2 h. p., \$9; 3 h. p., \$12. W. Hoffman Motor Wks., 1253 N. Halsted St., Chicago.

WANTED—We will have positions for several ex-perienced and competent chaffeurs who thor-oughly understand foreign cars. Mead Cycle Co., 1243 Wabash Ave.

FOR SALE—1903 Holley Motor Cycle; run very little; new bushings and piston; thoroughly overhauled this winter. First class condition. First check \$90.00 takes it. C. H. C. & Co., La Fayette St., Utica, N. Y.

FOR SALE—Ford automobile, with tonneau; run less than 100 miles, never in the mud; Dietz side lamps, new to me from the factory in Dec., 1903. H. M. Reed, Lima, O.

WANTED—First-class touring car, 4 passenger. Will exchange 160 acres of land worth \$800. John W. Baughman, Plains, Kan.

FOR SALE—Locomobile; new tires; never been run since put on. Bought new in 1902. High-est cash offer this month gets it. W. E. Rudy, Lima, O.

ORIENT Buckboard, 1903 model, in good order; \$250.00. James Watson, Montpelier, Ind.

FOR SALE—Packard F, 1903, complete, at half price. Used only part of season. Condition guaranteed. "Reliable," care Motor Age. price. Us guaranteed.

FOR SALE—One Northern gasoline runabout, almost new, in first class condition, at a sacrifice. Address J. H. D., 45 Prospect St., Bristol, Con.,

FOR SALE—Haynes-Apperson car in perfect running condition; carries two or four persons. Price \$700. I. X. L., MOTOR AGE.

FOR SALE—New Buffalo Electric Stanhope, latest model; complete with new battery, any make. Price \$1,200. Address G., MOTOR AGE.

A BARGAIN—1903 Columbia Electric Runabout.
Mark XXXVIII, with hand buffed leather top,
cost \$975.00. Exide battery, all in good shape;
good carrying space under seat. Splendid rig for
city physician. A genuine bargain at \$600.00.
J. M. Hoogerhyde, 358 Bates St., Grand Rapids,
Mich.

FOR SALE—One 1903 Winton touring car, equal to new, \$1,675.00; 6 Oldmobiles, \$350 to \$525; one Orient buckboard, run 200 miles, \$250; one practically new steam outfit. \$100. Write for particulars. Earl Fisher, 328 E. Market St., Indianapolis, Ind.

SPLENDID BARGAINS—1903 Winton touring car, 1903 Waterless Knox, 1902 Knox, 1902 Winton Phaeton, several Oldsmoobiles and steam runabouts; two second hand electric runabouts. Write us fully regarding your wants, and we will try to give you an interesting proposition. Adams & Hart, Grand Rapids, Mich.

FOR SALE—1903 union, new last June, sold through no fault; want 1904 model. Address Peter Woll & Sons Feather Co., Philadelphia.

WANTED—Late model gasolene motors; good repair. A. L. Gould, Dealer, Mobile, Ala.

FOR SALE—Having discontinued the building of complete automobiles, we have for sale cheap a lot of bodies, axles, engine castings, etc. Send for list. Russell Mfg. Co., Indianapolis, Ind.

AUTO BUSSES—Three 16-passenger steam busses and two 9 H. P. delivery wagons. First class condition. Moderate prices. Easy terms. Write for particulars. Peoples Rapid Transit Co., Ol-neyville Square, Providence, R. I.

FOR SALE—Second hand steam, gasoline and electric automobiles. hTe largest variety under one roof in America. Send 5c in stamps for catalogue. Mississippi Valley Automobile Co., 3935-39 Olive St., St. Louis, Mo.

IF you think of buying a CRESTMOBILE, get my experience. One for sale. F. H. Whittelsey, experience. (Hartford, Conn.

FOR SALE—YALE, in good condition. Bought new October, '03. Run less than 250 miles. Will sell for less than half price. S. M. Cummins, 217 Main St., Elkhart, Ind.

FOR SALE—One Autocar, has not run to exceed 3,000 miles; equipment consists of an extra tire with tube, one extra tube, four extra spark plugs, one rear lamp, two phare solar gas lamps No. 2, one extra generator. Price \$1,200.00. Address "P.," care Motor Age.

MEAD CYCLE CO.

EXCLUSIVE AGENTS FOR

BENZ-PARSIFAL, Mannheim, Germany; finest product of European manufacture; 1, 2, and 4 cyl., 8, 12, 22, and 35 h. p.; 30 to 70 miles. Stock on hand sold. Five fine cars on the way.

SEARCHMONT TOURING CARS, French type, 2 cyl., 14 h. p., \$2,500; 1904 model, type 8. only \$1,400

thres thres Largest automobile stock in Chicago. Demonstrations.

MEAD CYCLE CO., 1243-45 Wabash-av.

FOR SALE

Automobile Bodies

Made of the finest whitewood, some in the white and some partly finished, which we are unable to use as we are equipping our cars with alum-inum bodies. You can have them at your own price as we wish to close them out immediately.

Send for Illustrations and Descriptions

Matheson Motor Car Co., Ltd.,

Grand Rapids, Michigan

SUPPLIES FOR SALE

\$30.00 New Locomobile Engine.....List \$100.00 Large double air pump...... "Large water filter....." 5.00 12.5010.00Set leather fenders..... 12.00 5.00 2 wicker runabout hamper... " 4.50 9.00 60 ft. 3/4-in. bose, new...... 4... 7.50 3.00 Rubber foot mats..... " 3.00 1.50 Rubber storm aprons..... " 3.00 1.50

FOR SALE NEW 1903 WHITE STEAM TOURING CARS.

Just a few left. No vibration. No noise. No odor. Strictly fool proof. The only automobile that the agency contract does not require, as a condition, that the agent put in a repair shop. Price right if you mean business.

C. C. STOLTZ, Marion, Ohio.

For Sale 6 1903 Wintons; 10 1903 Olds; White Steamer; Cadillacs; Thomas; Electrics; Thomas; Electrics; Space. Write for our new February catalogues of 60 bargains.

Fisher Automobile Co. 330 N. Illinois St., INDIANAPOLIS, IND.

QUINBY AUTOMOBILE-BODY DEPARTMENT

1534 BROADWAY, COR. 45TH ST. EMERSON BROOKS, MANAGER.

-PHONE 6536 38TH ST.-



FOR UNINTERRUPTED EXPLOSIONS AND SMOOTH RUNNING

Sperry Sparkers" WITH YOUR NEW GASOLINE CAR.

NATIONAL BATTERY COMPANY

NEW YORK AND BUFFALO



Rims branded in the channel with this copyrighted mark, have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

A tire may make or break automobile enthusiasm, so insist on a portion of your investment paying for good rubber in the tire end of the equipment. Any user of

mmmmmmmmm

GOODRICH AUTOMOBILE TIRES

will gladly tell you about the added pleasure that this part of the outfit has afforded him.

The B.F. GOODRICH COMP'Y Akron Rubber Works

NEW YORK: 66-68 Reade St. & 1625 Br'dway
BOSTON: 157 Summer St.
BUFFALO: 9 W. Huron St.
SAN FRANCISCO: 392 Mission St.
DETROIT: 80 E. Congress St.

CHICAGO: 141 Lake St.
PHILADELPHIA: 922 Arch St.
DENVER: 1444 Curtis St.
CLEVELAND: 420 Superior St.
LONDON, E. C.: 7 Snow Hill.



IN ENDURANCE POWERS AS WELL AS IN STRENGTH AND SPEED THE FOUR-CYL PACKARD EXCELS ALL OTHER MACHINES OF THE VOITURE LEGERE CLASS

> MODEL "F" PACKARD made transcontinental trip in fifty-one days and won medals in leading American Endurance Contests.

> MODEL "L" 1904 PACKARD is equipped with all the desirable features of previous models and many improvements that make it the perfect motor car.

OTHER MODELS AT \$1,500 TO \$10,000

Send for illustrated descriptive literature and name of nearest agent

PACKARD MOTOR CAR CO., Dept. 3, Detroit, Mich.

Member Association of Licensed Automobile Manufacturers

New York Agents: Packard Motor Car Co. of New York, 317-19 W. 59th St., New York City